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Textile World

AUGUST, 1939

A McGRAW-HILL PUBLICATION

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TEXTILE WORLD

DOUGLAS G. WOOLF, Editor

Real News: Wallace Bites Agriculture

SECRETARY WALLACE has committed his latest—we wish we could say his last—act of folly. By putting into effect the export subsidy, over the opposition of all responsible groups in all divisions of the cotton industry, he has delivered what threatens to be the final blow to a branch of agriculture which supports millions of the people whose interests he was appointed to conserve.

It would be possible to feel sorry for this man who, in desperation at the ignominious failure of his "planning" to date, finds no way out except through even more desperate means. It *would* be possible, that is, if this were merely Mr. Wallace's own failure. But, in failing, he has dragged down with him cotton growers, cotton shippers and exporters, cotton manufacturers—and all the others who depend upon cotton for a living.

It would also be possible to feel sorry for him, in his latest pitiful act, if one could feel that Mr. Wallace had followed blindly a sincere personal conviction. The fact is, however, that up to a few months ago he has been a bitter opponent of the export subsidy idea—and merely did an opportunistic about-face when he could see no other way out.

It must be admitted that he was hard pressed. However, there was a clear way out if the Secretary had had the courage to take it. It was to admit the failure of the Government program and to take steps to restore a free market in cotton. We advocated such a procedure in these columns last February when we stated that the solution of the problem was "a free cotton market, of course" and added:

"The most important considerations are, first, an arrangement for orderly liquidation of existing Government-owned surplus over a period of time at a rate known in advance to the trade; and, second, a definite provision for the prevention, or at least limitation, of further accumulations of loan cotton."

But that, of course, would involve an act which Mr. Wallace never takes: abandonment of a course once chosen. His only answer is to take one more step in the same fatal direction.

AND WHAT A STEP this latest one is! Advanced as a method to restore world markets for American cotton—for the loss of which, incidentally, Mr. Wallace's own program is largely responsible—it will not make even an effective stab at accomplishing that. Moreover it assures a continuation of the hog-tied domestic cotton market which is strangling this branch of American agriculture. It will be the source of international ill-will at a time when a world crisis demands that Governments, and particularly the democracies, should bend all their energies toward engendering peace. It establishes a two-price system which threatens the very basis of our national economic system. It merits the united opposition it has received.

No one needs to guess at the folly of such an act. History supplies the answer. Mr. Wallace knows only too well the story of coffee, and of other commodities in which Governments have attempted artificial world manipulation.

As a matter of fact he must know by now the brutal history of his own acts during the last six years. He must know what a stupendous failure his program has been. His desperate effort to halt the debacle by trying some more of the same—only on a grander scale—is reminiscent of acts of other dangerous men who have ignored all warnings and followed their own blind will.

We use the term "dangerous" advisedly. We believe that the Wallace farm program, at least as applied to cotton, has been an increasing source of danger to the welfare of the country—and that his latest monstrosity has definitely raised that program to the position of National Menace No. 1.

THE EDITOR SAYS

One Blunder Must Not Scrap Wage-Hour Law

We have a hunch that Elmer Andrews, wage-hour administrator, would give a good deal to be able to "take back" the words he spoke at a recent press conference.

Stating that he was now opposed to exempting white-collar workers earning $200 or more monthly from the provisions of the law, he explained that he had originally supported such exemption but had changed his mind because organized labor opposed it. He added: "Organized labor has done such a swell job in helping me fight my battles, that I think it would be unethical for me to press that amendment if they are opposed to it."

One's natural inclination is to take a smack at Mr. Andrews for that remark and let it go at that. It would seem almost impossible that he could regain his reputation for fairness—and without that reputation his administration would be doomed to the fate which has befallen the National Labor Relations Board.

There are two reasons, however, why every effort should be made to help Mr. Andrews to live the remark down. The first reason is in fairness to the man himself. From our contacts with him, we are sure he is not the sort of person who would be forced to a decision purely by a pressure group. We are convinced he did *himself* a great injustice by his press comment. We don't really believe his decisions are guided by any such simple considerations as the support or opposition of a pressure group. We believe he had other ample reasons, and that he merely gave vent to a careless observation, under pressure from Washington correspondents.

The other reason is far more important. The interests of the industry demand that every effort be made to salvage the wage-hour act. The more we study the textile problem, the more firmly we become convinced that the first step to be taken toward its solution, if the industry is ever to make a profit, is to remove wages as the main competitive battleground. Let us make ourselves clear: We are not discussing sectional wage differentials. We are referring to the unbridled competition in wages which, under market pressure for business, can, and so often does, permit complete collapse in prices and in profit possibilities.

What advantage does good management or product development give to a textile company during a wage collapse? All the premium for those accomplishments can be wiped out overnight by a wage cut initiated by an inefficient, but also unethical, competitor.

We do not recommend frozen wage levels for the different occupations. We *do* recommend, however, a floor below which these chiselers cannot go. We have been recommending that for years—and we believe the wage-hour law, if properly administered, can do it.

We also have believed that Mr. Andrews could give such administration. Our shock at his remark is indescribable. Just look at the situation in textiles: The industry has just gone through weeks of hearings on a controversial matter of which Mr. Andrews is to be the final judge. The industry might properly inquire just how it could expect an impartial decision from a man who cannot bring himself to oppose a pressure group which has fought strongly on one side of the textile controversy. We are confident that manufacturers on both sides of the controversial issue would feel equally alarmed at this situation.

If we thought Mr. Andrews meant literally what he said, we would urge the industry to join in what may develop to be an attempt to have the administrator removed. But because we *don't* believe he meant it, and because we are still sure Mr. Andrews can do a square job for all, we urge the textile industry *not* to discard its faith in the wage-hour administrator, and not to permit him to destroy his usefulness by this one remark.

And, in return, we urge the administrator and his staff to check the crusading spirit which seems to creep over most men who get mixed up with social legislation. We can recognize the temptation but it might be well for them to remember that they are paid, not to espouse a cause, but to enforce a law in fairness to *all* parties involved. And there can be no question that many more groups of citizens are involved in this law other than organized labor which includes in its membership certainly less than 25% of the employees in industry.

AN INVITATION

FOR NOVEMBER we are planning what we consider to be the most important issue we have published in years. This Annual Equipment Check-Up Number—featuring Modernization for Profit—will be devoted largely to a series of short articles showing how individual textile manufacturers have reduced costs, increased production, improved quality of product, or otherwise bettered the efficiency of their plants through modernization of buildings and installation of new productive or auxiliary equipment.

In order to make this feature as complete and comprehensive as possible, we cordially invite all readers, whether mill men or equipment manufacturers, to supply us with items describing modernization jobs which have been carried out within the last couple of years. Each item should be brief—not over 400 words, preferably about half that length—and should give name of mill, type of new equipment and when installed, and results obtained; if possible, a photograph of the installation should be included. Articles complete with illustrations should reach us not later than Sept. 15; earlier if possible. Use of items submitted, is naturally subject to our editorial judgment and to editing to conform to our editorial style.

We Still Think So

If frustration of many predictions in recent years hadn't made sissies out of most business prophets, the events of the last month in industry in general, and textiles in particular, would be hailed with unrestrained enthusiasm. Possibly we should say "attitudes" rather than "events," because even though there has been tangible improvement in the stock market, and better demand and firmer prices in some key sections of the textile industry, the main uplift has been a psychological one.

In June we "stuck our necks out again," to quote our elegant head-line from this page in the issue of that month, and predicted improvement in general business, and in textiles, during the last half of the year. Thus far, events seem to be substantiating that prediction.

Repeating the well-worn but essential qualification about Mussolini and Hitler, we feel that—barring an eruption from those sources—things look pretty good for the next several months.

"Kick in Pants Needed"

MANCHESTER, ENGLAND, feels let down. After being taught to look up to the United States as the real source of promotional ability, that textile town across the sea discovers that "apparently even the home of sales promotion needs a kick in the pants once in a while." This discovery is made by the *Manchester Guardian Commercial* after reading the World's Fair editorial in the June issue of TEXTILE WORLD. The *Guardian* comments sadly:

"The critical in Britain are more than inclined to attribute much of the home textile industry's lack of success to an inability to adopt really good promotion for textiles of all kinds, from household goods and industrial fabrics to high fashion goods. There is no doubt much in the arguments, but one begins to have doubts about their truth when the additional point is made that America knows better. The truth is that we have become accustomed—outside textiles—to the reputation of the United States for 'putting things over.' It is interesting, therefore, to hear an American opinion.

"You may always find something interesting, and usually something amusing, in the leading articles of TEXTILE WORLD. The June issue leading article begins: 'On Flushing Meadow, Grover Whalen—he of the villainous moustache and the white gardenia—has built the World of Tomorrow. Buried in that world—and when we say buried, we mean buried—are the Textiles of Tomorrow. For it takes a detective to uncover the textiles on show.'

"The issue contains a special preview of textiles at the fair, commenting that it is necessary to have a separate section, not in spite of, but because of the fact that there is no textile building at the fair. 'If textile exhibits were concentrated in one building labelled as such the textile visitor would not need a guide,' the article says.

"The leading article grants that the initial selling period of the fair coincided with the collapse of the textile markets, but adds that this is at best not much more than an alibi. 'The truth is that the industry as a whole is still a long way from being promotion-minded. And so it was quite in character when it passed up one of the greatest promotional tie-ups in years.'

"An instance of the competition of other industries is given. A paper company has made plans for appointing additional distributors for its year-old tissue towel service division, and states that it organized the department as a result of a persistent consumer demand 'to supply a complete, de-luxe, modern, sanitary, flexible tissue towel service on a monthly basis to small towel users in manufacturing and general offices, retail stores, and to professional men and women.'

"The TEXTILE WORLD holds that this is not just an isolated section of the trade. It is happening in virtually all textile products. Paper household products have become strong competitors of textiles. The article expresses sympathy for the exploitation of new uses such as cotton bags and cotton roads, but feels that too often the promotion of existing outlets is neglected, and while paying tribute to National Cotton Week thinks that 'what the textile industry needs is a National Cotton Week state of mind every week in the year, in all its branches, and in all the individual manufacturing units. Maybe it also needs a Fuller Brush Man.'

"The leader closes picturesquely: 'If all our industry needs is a challenge, it certainly has a fine collection of them right now. And most of them have got to be met. Or else the World of Tomorrow will be tough scratching for the Textile Men of Today.'

"Apparently even the home of sales promotion needs a kick in the pants once in a while."

[We feel as low down as a man who has just told a trusting child there isn't any Santa Claus.—*Editor,* TEXTILE WORLD.]

Lists 148 Hidden Taxes

THE TAXES, most of them hidden, paid by the user of cotton goods are listed in a full-page advertisement in newspapers of its State by the Wisconsin Public Relations Committee. The advertisement states that it is "paid for by citizens interested in public education on the subject of taxation."

Hidden taxes on cotton dresses and other cotton clothing are claimed to number 148, made up as follows, according to the advertisement:

Taxes paid by the cotton grower:

1. Federal income tax
2. Federal motor fuel tax
3. State income tax
4. State personal property tax
5. State real estate tax
6. State license tax on trucks
7. State motor fuel tax
8. Automobile driver's license tax
9. Sales tax on tools and supplies
10. County, parish, township, or school-district assessments.

Taxes paid by cotton ginner:

All of the above taxes, plus:

1. Federal payroll tax for unemployment
2. Federal capital stock tax
3. Federal excess profits tax
4. Federal surplus tax
5. State payroll tax (unemployment)
6. Corporation franchise tax
7. to 10. City, county, state occupational license taxes
11. Self-insurance or workmen's compensation tax.

Taxes paid by the cotton mill—all the above taxes.

Taxes paid by bleachers and dyers—all the above taxes.

Taxes paid by manufacturers of button and buckles—all of the above, and probably a few more passed on to them by the companies which mined the ore and produced the alloy for materials.

Taxes paid by transportation companies—16 of the above plus a special utilities franchise tax.

Taxes paid by the wholesaler or jobber—16 of the above plus gross receipts tax and local water, sewer, and municipal services assessments.

Taxes paid by the retailer—all of the above taxes, plus a store license tax.

Total taxes—148.

The report goes on to say that "authentic, unbiased investigation shows that 20% of the retail cost of an article is hidden taxes, added on by everyone that had anything to do with the production of the goods. Take the cotton goods taxes referred to. When you spend a dollar for such goods, you can be assured that you get 80¢ in merchandise because 20¢ has already been spent for hidden taxes. This 20¢ does not go to the cotton grower, the manufacturer or the retailer—to make jobs and happy families—it goes to support tremendous Government expenditures."

32½c. Wage Comes Home to Roost

It is now Elmer Andrews' problem —and a nice sticky one it is

By BLAINE STUBBLEFIELD
Washington Office, TEXTILE WORLD

IN 30 SECONDS President Roosevelt in press conference put Wage-Hour Administrator Andrews on a tough spot and planted a bomb of uncertainty under the textile wage question, embattled these ten months. He remarked that he favors wage differentials based on living costs, and that southern workers do not have to buy overcoats and furnaces. A group of southern congressmen and manufacturers' representatives had called upon the President the day before and requested that he intervene to prevent the textile committee's recommended 32½¢ flat minimum wage from being applied to low-wage areas of the South.

The President was instantly charged in Washington conversations with reversing the position he took in calling the South "Economic Problem No. 1." Of course he was also charged with grasping at a political straw as Congressional defeats swirled around him. In addition still others expressed belief that the President had no right to intervene because the law says the administrator shall base his decision on the committee's evidence.

Considering the situation as it was before FDR's statement, Administrator Andrews estimated that his final decision on the 32½¢ wage recommendation of the Textile Committee might be made around Sept. 1. If he accepts the recommendation and issues his order, it will be his additional responsibility to state therein what date it shall take effect. The law says that "reasonable notice" shall be given.

The administrator himself has given no clue as to what he thinks reasonable notice might be. It is argued by observers that Mr. Andrews has no authority to stretch the "notice" period beyond the usual procedure of legal publication.

Mr. Andrews undoubtedly realizes that if he sets the effective date too soon it will look as if he had made up his mind in advance. People who know him best make a rough guess that he will allow 30 days between his order and the effective date.

If the date were set beyond Oct. 24 the result would be two increases instead of one: the 5¢ automatic increase, and the 2½¢ increase on the date of effect. A date of effect on or before Oct. 24 would make the 7½¢ increase practically in one jump. There would be no economic point in setting the effective date very soon after Oct. 24. Only by setting it months after that date would there be any cushioning of the 7½¢ jolt.

The case is summed up in Washington approximately as follows: New England, the labor unions, plus certain southern economists and some few southern mills stood firm for the recommended wage. These people believe that they proved that the increase in wages would not seriously affect selling prices or consumer ability to buy; that textile wages are below wages paid by other industries in the South; and that wages should be raised to effectuate the purposes of the act.

The opposition believes it proved that many southern mills are losing money and that they would close because of inability to pay the proposed rate if it is ordered; that these mills would not have the capital to put in new and efficient machinery to offset the increase; that even if they could afford improved mechanization, further unemployment would be the result; that the more prosperous mills which could pay the increase would further mechanize to offset the loss of profit, thus also contributing to unemployment.

Nobody here whose opinion is worth anything will stick out his neck with a prediction as to whether the administrator will accept or reject the committee's recommendation especially since the President took a hand.

IF YOU THINK he *will* accept it, you can support your argument with the fact that, aside from testimony, the whole wage-hour program is to some extent resting in the textile balance. Mr. Andrews cannot ignore the fact, although he may try, that defeat of Committee No. 1's recommendation would seriously weaken the industry committee system.

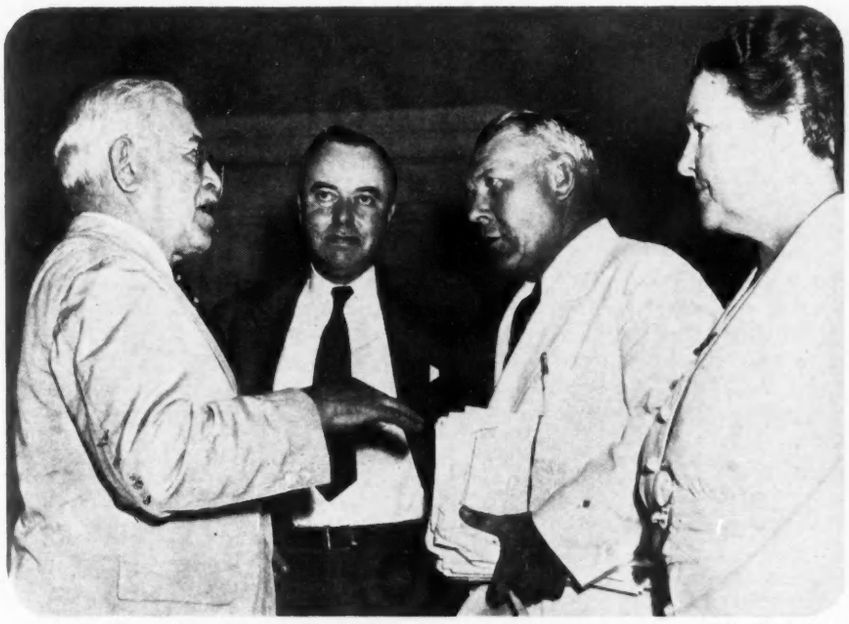
It would take a lot of any man's courage, in Mr. Andrews' position, to reject the committee's proposal and then face the President and the Congressmen and the House Labor Committee who have been battling to prevent the opposition from enacting the Barden amendments, which would exempt some two million workers in initial processing of farm produce.

A few days ago the press and the capital were surprised when Mr. Andrews announced that, because organized labor is doing a swell job of fighting his battles, and because labor is opposed to the exemption from the hours provision of workers getting $200 per month or more, he has ceased to support and now actively opposes this one of the Norton amendments. The obvious conclusion from that would be that, since labor is also opposed to rejection of the Textile Committee's report, if the administrator feels he must conform to labor's program he would have little choice but to accept the recommendation.

If you think that Mr. Andrews *will not* accept the recommendations you can argue effectively on that side too. The opposition says that if the recommended wage is put on the South, it will eventually bring about a serious demand for repeal or drastic modification of the wage-hour law. Recent strong support of the Barden amendments by a lobby of farm bureaus and cooperatives indicates that the nation's farmers don't like the law and that they might possibly be brought into an alliance with the southern textile industry for a strong repeal drive next year. In fact, southern cotton growers have already been told that increased cotton mill costs from the wage order would be thrown back upon them.

Some political experts here go so far as to say that the farm-wage-hour issue might be wielded effectively against any third-term ambition the President may have. It would not be very difficult to make the farmers believe that the administration is aiming to throw the labor standards blanket over all agriculture as one of its grand flourishes before the New Deal curtain falls—if it falls. And there *might* be some ground for such rural fears.

TURNING from immediate considerations to the prospect for court battles if the 32½¢ order is given, the administrator is thought to have little to fear on the question of constitutionality. The Supreme Court as now constituted favors the objectives of most Administration reforms, and the constitutionality of these reforms is so broad a question that the court can rule as it wishes with hardly a linguistic struggle. Concerning the contentions that the wage order would violate the "due process" clause; that the Constitution does not authorize equalization of competitive conditions between regions; and that Congress has no power to regulate *production* in interstate commerce—of course the wage-hour people don't know what the court might do.



Wide World Photos

Wage-Hour Administrator appears at House Rules Committee— (left to right) Rep. Adolf Sabath, Elmer Andrews, Rep. Graham Barden, Rep. Mary Norton.

But they feel that now is a good time to find out. In other words the shadow of the court isn't going to have an effect on Mr. Andrews' decision.

It might be well to think of Mr. Andrews' problem as to some extent a personal one, like any other man's, only much tougher. He wants to make good on this job, so that he can keep it or get a better one. No matter what he does, somebody rips out a scream of murder. On this issue he must try to determine in advance which side can push up the highest decibel reading.

To some idealists here it has seemed that Mr. Andrews' best course in Washington would be to take a courageous course and hew to the line and let the chips fall. That way he could hardly miss, they say. If the Government didn't go for him, industry would. To most it has seemed that he has been doing just that. But some are disturbed since his reversal on the $200 amendment and they will watch whether he again casts his eye at the political weather vane. This is not to say that a political course would render any more injustice than usual to the eggs that always have to be broken to make an omelet.

That Mr. Andrews has a tough decision on his hands is pointedly attested in the Roosevelt-Barden political turn on amendment of the law. Rep. Barden is a strong New Dealer from a rural district of North Carolina. Thus two New Dealers, both political experts, stood squarely opposed on a matter very similar to Mr. Andrews' problem. Obviously Roosevelt or Barden was politically mistaken.

Some old hands on the Hill say that the wage-hour division need not drive with such a heavy foot on the wage-raising accelerator. By doing so it increases the risk of stirring up opposition groups which might conceivably combine and destroy or weaken the law. Even if the administrator just sat tight, let the industry committee program ride ahead on fronts where there is little shooting, and meanwhile pressed his statutory minimum wage enforcement for all its worth, he would come out best in the end, they claim. By "end" they mean the end of seven years, when the statutory minimum becomes 40¢. It is an iron-clad law, they say, under which the labor reformers can't lose. All they have to do is keep the law on the books.

The division is scanning press editorials and reports very carefully—has a big batch of them in folders. Looking through this material, the writer finds a good percentage of reporting, from both northern and southern papers, quite free of prejudiced coloring. The volume of editorials exceeds the news reports. Editorials generally adhere to the traditional attitude of regions where published. But enough southern editors break ranks to confuse seriously any one who goes by "what he reads in the papers." For instance an Alabama paper says the South is illogical in battling for removal of WPA pay differentials, pledging war to the death against rail-rate differentials, while southern managers of northern-owned mills join southern industrialists and politicals against the proposed minimum wage. The northern editorials seem unanimous for the recommendation. One paper even admits that the issue is New England's battle against the South.

BOTH SIDES evidently regard the Washington-Atlanta-Washington hearings on the recommendations as adequate and fairly conducted. Whether it was premeditated or not, the publicity value of the Atlanta session was considerable; had this act been staged as merely a part of Washington's three-ring circus it would have received far less attention in the States' newspapers.

Among the witnesses, for both sides, whose testimony you still hear mentioned hereabout as particularly significant, were Robert R. West, of Danville; Hyman W. Battle, of Rocky Mount Mills; John Abt, attorney for TWUA; Tyre Taylor of American Cotton Manufacturers Association; Boris Shishkin, of UTWA; Charles A. Cannon, of Cannon Mills; and Russell T. Fisher, of the National Association of Cotton Manufacturers.

One incident in Atlanta that got headlines in Washington and distant places was the southern demand for information from the unions, which would reveal their contract wage rates in the South as compared with the North. It is thought significant that the union leaders were able to resist subpoena on the ground that the data sought was irrelevant.

On July 25, Mr. Andrews heard final oral argument on the recommendation. Mr. Abt and Mr. Shishkin appeared but Mr. Taylor and Mr. Fisher did not, announcing they would file extensive briefs. The deadline for briefs was extended from Aug. 2 to Aug. 12. From then on the whole controversy continues inside of Mr. Andrews' head.

Enter the Export Subsidy

Wallace put it into effect despite opposition—Domestic subsidy considered

By PAUL WOOTON
Washington Correspondent, Textile World

OVERRIDING A CONSIDERABLE opposition, Henry A. Wallace, Secretary of Agriculture, put his export subsidy program for cotton into effect July 27. The real attitude of the Department of Agriculture was not expressed in the reassuring statement issued by Secretary Wallace. Despite the opposition in Congress, in the State Department, in the cotton trade and in the cotton-textile industry, it is the studied intention of the Department of Agriculture to use this subsidy method in an attempt to win back the export market for lint cotton.

The initial subsidy of 1½¢ per pound goes no further than equalizing the domestic price and the price at Liverpool. There was strong sentiment within the department to make an initial subsidy of two cents. This would have offset the loan and would have given some inducement for consuming countries to buy American cotton, but it was felt that producing countries would have less ground for charging that the United States had adopted the export methods of Germany if the subsidy went no further than wiping out the price disparity. It seems clear, however, that should the producing countries show any reluctance at the preliminary meetings to be held in September to enter into a quota arrangement they will be given to understand that the United States intends to regain its normal export business, regardless of the cost.

The reasoning behind this attitude is that the economic life of twelve American States is geared to the production of cotton. Normally, 40,000,000 acres of southern land are used for cotton growing. No important portion of that acreage can be diverted to other crops as a practical matter. Even where the land is suitable for other purposes, it would be difficult for the farmers and farm workers to make the change. Even if the change could be made, it would mean the substitution of one surplus crop for another.

Chief support for the export subsidy came from the cotton farmers. They are convinced that they have a fine combination of soil and climate which fits their section peculiarly for the production of this crop. This, combined with the cumulative experience of generations, they regard as an asset which they are unwilling to toss aside. In the opinion of many of the officials at the Department of Agriculture the South's welfare depends upon the continued use of normal acreage or nearly normal acreage for cotton until industrial development proceeds to the point where it will be profitable to diversify.

It is claimed at the department that the cotton mills will not suffer as a result of the higher price level that is expected to follow the payment of subsidies. Increased farmer purchasing power, it is held, will offset the price increase when it is considered that the price of raw cotton is only one factor in manufacturing cost. The price of cotton must be kept a little higher than the price that has prevailed so as to keep it out of the loan.

DOMESTIC SUBSIDY: There was strong

EXPORT SUBSIDY RATES

	Cents per Pound Net Weight
COTTON	1.50
COTTON PRODUCTS	
Class of Cotton Products:	
A. Card strips, comber waste, and unbatted cotton as part of a cotton product	1.50
B. Picker laps, sliver laps, ribbon laps, sliver, roving, batting, and mattress felts made wholly of unused cotton, card strips, or comber waste or combinations thereof	1.60
C. Yarn, thread, twine, cordage, and rope, either polished or unpolished	1.80
D. Coated products, including rubber coated and rubberized products, buckram, crinoline, and elastic containing 20% or more of rubber by weight, and articles manufactured therefrom	1.00
E. Fabrics (excluding buckram, crinoline, and coated fabrics), absorbent cotton, and elastic containing less than 20% of rubber by weight	1.90
F. Articles manufactured from fabrics (other than buckram, crinoline, coated fabrics, or elastic containing 20% or more of rubber by weight)	2.10
G. Articles not otherwise specified and articles containing a mixture of cotton and other fibers	1.50

If an article contains two or more cotton products, it shall be considered as within the class of the cotton product constituting the largest portion by weight of such article.

No payments will be made in connection with any article containing less than 50% by weight of cotton fiber.

No payments will be made in connection with the exportation of waste (other than card strips and comber waste) or in connection with the exportation of used or second-hand cotton products or of cotton products made from used or second-hand materials or waste other than card strips and comber waste). Waste is motes and fly, card strips, comber waste, slasher waste, cuttings, clippings, rags, and similar materials (not including substandard products and short length piece goods) incident to the processing, manufacturing or fabricating of cotton or of cotton products.

sentiment in both the House and Senate for a direct subsidy to manufacturers but failure to get that plan into concrete form earlier in the session made it impossible to secure the necessary legislation. The idea, however, is not dead. Marvin Jones, the chairman of the House Committee on Agriculture, is the chief proponent of that plan. He thinks it would be better than an export subsidy. If he could have had his way he would have used all the money available for an export subsidy for payments to manufacturers, with the understanding that the amount of the subsidy was to be deducted from the selling price. His thought was to call to Washington representatives of manufacturers, wholesalers and retailers with the idea of drawing up an agreement under which the full amount of the subsidy would be passed on in its entirety to the ultimate consumer. As the subsidy would be applied to goods used largely by low income groups Mr. Jones was strongly of the opinion that this was the best way to keep subsidy money at home.

As this is written, the Department of Agriculture is trying to work out the details of a stamp plan under which cotton goods can be made available to the low income groups. There is every indication that this plan will be put into effect as a part of the program to stimulate domestic use of cotton. No official announcement has been made as to the details of the plan but it is understood it will not be confined to those on relief, as has been done in the use of stamps to increase consumption of surplus food products.

The Federal Surplus Commodities Corporation has an outright appropriation of $14,000,000 to be used in stimulating domestic consumption goods manufactured of cotton. In addition to the stamp plan it seems probable that there will be a mattress program and increased distribution of cheap cotton goods through WPA channels.

EXPORT SUBSIDY RATES: In working out the rate payment to be made in connection with the exportation of cotton products, every effort was made to provide a simple classification. The same conversion factor as was used in the old processing tax schedule has been used, only in this case the same exactness, to the last penny, is not attempted. Rates of payment are shown in panel on opposite page.

Textile Men Meet with Wallace

From a Special Correspondent

THE ANNOUNCEMENT by the Department of Agriculture of an export subsidy of 1.5¢ per pound on raw cotton and comparable subsidies on cotton goods and cotton waste, was the result of administrative policies which culminated in two meetings in Washington last month . . . one an executive session to which 19 cotton and trade associations had been invited to send one representative each . . . and another, much more important and completely secret.

When the trade representatives met July 13, they realized the program was not a "discussion" in the full sense of the word, so far as the subsidy itself was concerned. It was a discussion of methods of making the subsidy workable: in other words, simply establishing certain lines of technical procedure. The real program had been worked out at a meeting the Saturday before at which Oscar Johnston, president National Cotton Council, who had previously opposed the export subsidy in many public statements, changed his tune and joined forces with E. F. Creekmore, president American Cotton Cooperative Association, and Secretary Wallace. W. L. Clayton, the fourth member of the party, is assumed to have maintained his stand of opposition as he filed a brief at the July 13 meeting in behalf of the cotton shippers, opposing the subsidy.

The cotton textile manufacturers' representatives present at the meeting filed a brief in which they strongly opposed the export subsidy, offered a possible substitute plan, and then demanded that should an export subsidy be put into effect the industry be granted "immediate, automatic, and complete protection against any increase in imports of cotton goods processed from cotton of domestic or foreign growths."

They also at the same time requested that domestic cotton textiles, products, and waste exported receive benefits comparable to those placed on raw cotton.

The textile representatives present included Fred W. Morrison, Cotton-Textile Institute; Russell T. Fisher, National Association of Cotton Manufacturers; Mildred G. Barnwell, Southern Combed Yarn Spinners Association; A. W. Fisher, American Cotton Manufacturers Association, and also representing the Georgia and Alabama Cotton Manufacturers Associations; Lewis T. Barringer, representing the North and South Carolina Cotton Manufacturers Associations.

Harris & Ewing

Wallace discusses cotton export program. Seated left to right: W. R. Meadows, Registrar of Chicago Board of Trade; Secretary Wallace; Frank H. Hillery, President of Textile Export Association of U. S. Standing, left to right: Russell T. Fisher, President of the National Association of Cotton Manufacturers; Willard Lewis, Textile Waste Exchange; C. E. Wakefield, Arizona Cotton Association.

F.T.C. Converting Rules

(From Our Washington Office)

VIRTUALLY no opposition was expressed at hearings before the Federal Trade Commission July 17 on its revision of trade practice rules for the cotton converting industry. Only two witnesses appeared, and no communications were received. The two who appeared were Irving C. Fox, of the National Retail Dry Goods Association and W. O. Fickett, president of the Textile Fabrics Association. The hearing lasted little more than an hour. Mr. Fox was granted a week's extension of hearings in which to study Rule 4 which has to do with deceptive labeling of imported goods, and to prepare and submit a brief. Henry Miller, assistant director of the Trade Practice Conference Division, conducted the hearing.

Rule 4, in the proposed revision drafted by the Commission with cooperation of the industry, states that fabrics which have been (1) woven or fabricated in a foreign country and imported in the gray or other unfinished state and dyed or finished in this country, or (2) imported in the finished state and redyed or refinished here, shall be so labeled and sold, otherwise the transaction is an unfair trade practice. This rule was the only one that developed any controversy.

Mr. Fox stated his opinion that the rule itself is not very important, because other statutes already control the labeling of imported goods. His primary concern was, he said, that no rule be so worded as to hold the retailer responsible for the accuracy of labeling as to the country of origin. Commission personnel would not comment, but observers said the rule is likely to stand as presently worded, regardless of suggestions; the same rule has been applied to other industries. Report as of July 27 was that Mr. Fox had neither appeared nor filed a brief.

Mr. Fickett said that it was the hope of the industry that the commission would approve the rule. It would be effective, he said, toward the elimination of an unfair condition in the industry. He cited cases in which cotton textiles had been imported into the country, made into garments, and passed through retail channels as American textile products.

Mr. Fickett asked Mr. Miller what action should be taken in such cases of deception. Mr. Miller said he could not make a decision on a hypothetical case, but that complaints should be filed for investigation, consideration and action by the Federal Trade Commission.

In its draft of proposed revision of the rules, dated June 30, the Commission estimates the cotton converting industry and integrated producers of cotton piece goods and cotton-rayon mixes at 300 firms, which are doing approximately $400,000,000 worth of business annually. Mr. Fickett estimated the volume of business at $400,000,000 to $600,000,000, and noted that this is about 51% of the volume of the entire textile industry.

The original trade practice rules for cotton converting were promulgated July 21, 1936. In its draft of proposed revision, the Commission emphasizes that "These rules have not been approved by the Federal Trade Commission," so that they will not be mistaken, as sometimes happens, for the rules in effect. And it warns that the proposed rules "do not supplant or relieve any member of the industry or other party of . . . complying with" existing rules.

As usual the Commission makes no statement as to the probable date of promulgation of the revised rules, but attachés said it was hoped to have them in effect within a few weeks, which suggests early August.

Silk Parade for Sept. 18

THE WEEK of Sept. 18 brings the sixth annual "Silk Parade" to manufacturers and distributors throughout the country. Behind the scenes, all branches of the silk industry are preparing to cash in on this prestige and profit-building week. The Silk Parade is a live selling point in urging necessity of keeping an adequate amount of silk on hand to meet the demands of this promotional event.

As there are nearly 60 different items of silk merchandise shown in the average store, there is a broad market involved. Fabric manufacturers find it profitable to display in their show rooms their newest silks, tieing them up with the Silk Parade poster. This not only serves as an inspiration to the selling force, but calls the attention of prospective buyers who visit the show room, to this promotion. Textile men are cooperating with piece goods buyers and cutters in planning special promotions. Salesmen are stressing to their customers that silk week gives an opportunity not only to build a name for quality merchandise but to increase units of sale.

To aid manufacturers cooperating with the Silk Parade, the International Silk Guild this year is offering an advance Silk Parade trade poster. This will be followed by the regular Silk Parade poster which is sent to retail and wholesale houses together with advertising and display suggestions, the latest selling and fashion information, merchandise news for the fall and winter season, mats and reprints of tie-ins with national magazines. Consumer periodicals, national newspaper and magazine publicity, radio, moving picture and television programs are also timed for release during the week beginning Sept. 18.

One of the Cheney displays for the 1938 Silk Parade which shows a close tie-in with the poster for that event.

What Congress Did and Did Not Do

Summary of legislation of special interest to textile manufacturers

We asked our Washington office to prepare a summary of the results of this session of Congress which have a bearing on industry—and of course particularly those which affect the textile industry primarily. Congress adjourned on Aug. 5. —EDITOR.

THE SEVENTY-SIXTH CONGRESS worked mainly along two lines. Led by President Roosevelt, who cast a belligerent eye over each ocean and prodded the country into a more determined defense attitude, the legislators handed the Army and the Navy a peacetime record of over $2,000,000,000 for armament and expansion. Nevertheless, though the President led Congress in the war dance, it was Congress that muted his tough talk to dictators and in the end blocked his demand for repeal of the arms embargo for the benefit of the Democracies.

Congress spent the rest of its time spending an all-time high of $13,000,000,000, and trying to patch existing New Deal reforms which were buffeted by a swing of sentiment toward the right. This patching was sometimes in harmony with the Administration, but more often not. The President took a terrific beating during the last days. The conservative minority's chief aim throughout was to appease and even to encourage business. But because most of its efforts to that end were considered inimical to the President's objectives, the minority succeeded on only one count: the modification of tax burdens.

Wage-Hour amendments were of primary interest to the textile industry. One of the proposed changes would have abolished the "area of (farm) production" while putting some 2,000,000 first-process workers under a 60-hour week, some of them under the minimum wage. Recently a group of farm bureaus and cooperatives organized strong opposition in Congress, arguing that the additional cost to first processing would be thrown back as a reduction in farm prices. Rep. G. A. Barden of North Carolina wrote the bureau's counter amendments. The House Rules Committee, favoring the bureaus, put the original Norton amendments and the Barden amendments in a deadlock. President Roosevelt intervened against exemption of the process workers but the controversy was carried over to next session.

Truth in fabrics legislation, bandied about Washington for at least 25 years, again passed the Senate, 48 to 23, but was lost in the House. This time, more consumer groups have come to its support than ever before. The opposition says that it would create a monopoly to the detriment of small manufacturers. Undoubtedly it will bob up again.

Cotton export subsidy totaling about $60,000,000 (one fourth of the $113,000,000 surplus commodity fund, plus certain import customs revenues available) was provided in the Agriculture Department's billion-dollar appropriation for 1939 (see page 44). . . . By agreement with England, ratified by the Senate, 600,000 bales will be swapped for British rubber and tin. The Commodity Credit Corp. will administer the exchange.

Self-liquidating loan (now called "recoverable" loan) of $2,560,000,000, proposed by the President, was the last major issue on the Hill. Critics killed the "self-liquidating" title, contending that the Treasury would eventually hold the bag for much of it, and that it would evade and over-shoot the $45,000,000,000 debt limit. Federal Loan Administrator Jesse Jones' intimation that RFC has $1,300,000,000 for self-liquidating projects plus the last-minute economy landslide, were the biggest influences in killing the measure. Agencies which would have drawn funds under the bill are already making application to RFC.

Mead bill for small business loans died, at the hand of Jesse Jones, who argued it would not quickly aid recovery, and that plenty of money is available on sound collateral. Need for small business credit was admitted by the Administration, however, and its economists are studying feasibility of an industrial investment trust, to be sponsored by the Government.

Wagner Act amendments were blocked partly by strong though divided labor opposition; partly by what appears to have been an error on the part of pro-amendment forces who joined Republicans in calling for a special committee to investigate the Board; and partly by Board ruling that an employer caught between two labor groups could call for an election and could have more time to answer complaints.

Walsh-Healey (Public Contracts) Act amendments were passed by the Senate, but killed in the House. The bill would have reduced from $10,000 to $4,000 the amount of Federal contracts above which the labor provisions of the act would apply, and it would have blacklisted companies which the courts might find to have violated the Wagner Act.

The Revenue Act extends excise taxes to June 30, 1941; provides that the part of undistributed profits tax on corporations remaining in the 1938 Act will expire at the end of 1939; sets a new flat rate of 18% instead of the 16½ to 19% sliding rate, while old rates are kept on normal-tax net corporate incomes of less than $25,000; provides for a net loss operating carryover. Business regarded this Act as an economic gain and as a psychological victory.

Social Security Act revision, freed from deadlock in conference at the last moment, will advance the date of old age benefits from 1942 to 1940 and save industry about $825,000,000 in taxes in three years by freezing employer tax at 1%. . . . The Hatch bill to take the profit out of vote-getting was passed and sent to the President, who signed it with reservations. . . . The cotton net weight bill passed the House but never came to vote in the Senate. . . . Cotton price adjustment proposal was rejected, as was also a plan to cover cotton under the crop insurance law. . . . President got continuation of stabilization fund, monetary powers, and 1940 relief fund under restrictions. He lost his housing bill.

Men Edge Toward Spun Rayons

Use in sport clothes supports movement of staple in regular summer wear suits

By WILLIAM B. DALL

Managing Editor, TEXTILE WORLD

SPUN-RAYON SUITINGS for men's wear have been in the incubator stage for several years. The season now current, trade factors are beginning to believe, will witness the hatching and growth.

The immediate division of the men's wear field most directly concerned with this development is that of summer suits and sports wear. In 1937, it was estimated that of total production of 23,000,000 men's suits, only 3,000,000 were distinctly summer suits. It seems unlikely that the 1938 production exceeded this, but in the current 1939 retailing season the volume has been such as to suggest a basis for definite expansion in the 1940 season. The summer-suit vogue gained its principal impetus six or seven years ago when Goodall Co. began to popularize Palm Beach suits on a broad scale, and that company has always had the giant's share, doing 41% of the business in 1935 and about 45% of it this year. The total volume of all summer suits has been growing right along except for a brief set-back in 1938.

The market is far from saturated since it appears that only one summer suit is sold to every seven of the regular spring and fall weights. Yet the lighter types may be worn comfortably for four months out of the year in the North and for six months or more in the South. The fact that darker-colored styles in summer suitings are now the best sellers is considered by the merchants who handle them as a good sign that sales are no longer restricted to the upper-income brackets, as were the light-colored garments, but that the average customer who makes up the volume market is the buyer.

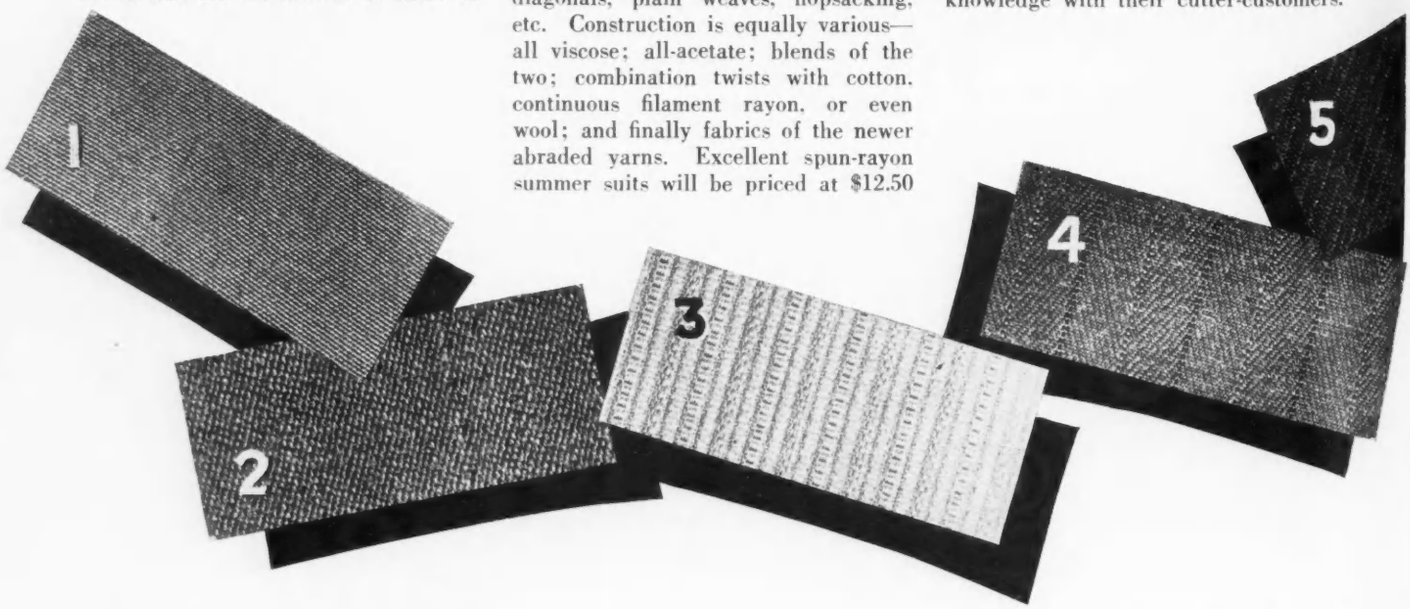
Woolen and worsted manufacturers have not gone so far in preparing all-spun-rayon fabrics for the summer-suit field as have cotton mills. The wool manufacturer is prone to look on staple fiber as a kind of adulterant, as something to mix with his regular raw material to effect lower cost. With much excellent wool not much over 75¢ and staple at 25¢ there is no great incentive for mere partial substitution. On an 11-oz. cloth of 50-50 composition there would be a saving of only about 17¢ in raw material cost and the right to brand as "all wool" would be lost. That last named merchandising appeal they regard as worth more than 15 or 20¢ per yard. The tropical worsted suit is generally priced to sell at $17.50 and higher.

Right now, therefore, it is the all-staple fabric that is catching the eye and the imagination of the market. It is the cotton mills that are giving closest attention to this material and already there are diverse types on the market—suitings of worsted appearance and styling, gabardines, coverts, diagonals, plain weaves, hopsacking, etc. Construction is equally various—all viscose; all-acetate; blends of the two; combination twists with cotton, continuous filament rayon, or even wool; and finally fabrics of the newer abraded yarns. Excellent spun-rayon summer suits will be priced at $12.50 to the consumer; some even less; slack and shirt ensembles at $7.50.

Cotton mills may have the advantage of a previous experience with rayon and a more vital contact with the need for experimentation and diversification; woolen and worsted mills have the advantage of styling experience and an immediate sales contact with clothiers.

Executives who have launched successfully spun-rayon suitings do not belittle the months of trial and error which preceded their success. Their warnings are vehement that newcomers into the field lay the most careful groundwork for turning out truly meritorious goods, since they believe that few things would harm the industry as much as a flood of substandard spun-rayons. Poor goods could not aid the house that made them, and would hurt the mills and clothiers who are making a market for quality goods.

Clothiers are finding things to learn in handling spun-rayons. Fine needles must be used in sewing and they must be promptly replaced at first sign of dullness. Otherwise the seam "pebbles." Also the cutter cannot expect best results by adapting rayon shirtings to suit manufacture—he must be sure he has the materials that are right for his purpose. Mills which have worked over constructions and finishes for three years before putting the lines on the open market are sure of their ground and willing to share their knowledge with their cutter-customers.



An unexpected channel for rendering the average male rayon-conscious, has been found in modern sport clothes. Transferred in spirit from the women's wear field, matching slacks and shirts in hopsacking and other fabrics of a women's wear character have proved to be important items this year. Many separate slacks have been made of similar fabrics. Whatever comfort and pleasure the wearers get from these garments, will be subconscious salesmen in putting over the basic spun-rayon numbers in the more sedate field of summer suits.

And slacks have touched high spots of volume this year. Based on Bureau of Census reports for the first four months of 1939, total suit production was proceeding at rate of 26,700,000 annually and separate trouser production was at the rate of 17,000,000 annually. Even granted that the second half of 1939 will see a seasonal falling off in this rate of separate trouser production, it is still of a magnitude to make it exceed for the time being the importance of the summer suit trade.

1. Congo Cloth (sold by Brand & Oppenheimer), an established summer suiting of several seasons standing, combining both spun and continuous-filament rayon. **2.** Covert suiting of Crown-Tested spun rayon-and-wool blend. **3, 4, 5.** A group of all-spun-rayons from the Rivercool line of Riverside & Dan River Cotton Mills. They are shown in stripes, herringbones, diagonals, Bedford cords, etc., styled in the best worsted tradition. **6.** Fabric for men's slacks made of Tennessee-Eastman's Teca (Slik-Eze line of New York Knitting Mills). **7.** Twill-weave dinner coat fabric made of abraded acetate yarn (from Fabric Development Department of American Viscose Corp.) **8.** Gabardine for men's shirts from S. T. Palay Textile Corp.,

Just as old line wool mills have been letting the all-spun-rayon suiting business drift to cotton mills, so the old line clothier has been letting the specialty house do most of the making-up. The clothier cannot for long let things slide like this with impunity, for he is finding himself left with only one and one-half seasons in his year instead of two, and he is being hurt in spreading a two-season overhead over a one-and-one-half season year. His seasons are, of course, fall (still a full season) and spring (now only a skimpy half-season at best).

Although for 1938–1939 spun-rayons did not gross importantly in summer suits, the probability of expansion based on the facts already given seems great. For 1937, authorities break down the total summer-suit business about as follows: mohair mixtures, 30%, tropical worsteds 26%, other wool 10%, cotton 23%, linen 7% and rayon and silk 4%. Inroads into every one of the classifications by spun-rayon is a likelihood. Already the market's leader, Palm Beach, has adapted its manufacture to its needs and, instead of one fabric as formerly, is making four or five, some containing rayon.

Spun-rayon enthusiasts go beyond the hope of spun rayon getting a goodly share in the present summer suit business—said to be 3,000,000 suits with retail value of perhaps $50,000,000. They believe that the utility, price-appeal and flexibility of styling peculiar to their lines will give new zest to the summer suit trade generally and expand it hugely to the benefit of the textile industry, the clothier and the consumer.

Up-to-Date Air Conditioning

Important feature of modernization program at Buck Creek Cotton Mills

THIRTY YEARS AGO T. C. Thompson, one of the pioneer builders in the southern textile industry, organized and built on the banks of Buck Creek, Siluria, Ala., the Selma Cotton Mill. In 1911 the company was reorganized and the name changed to Buck Creek Cotton Mills. J. T. Phillips, now president and treasurer, came with the mill thirteen years ago as superintendent. H. M. Johnson, still a young man, has been superintendent since 1932. The principal product of the mill is flannel which goes to the rubberizing trade and then finds its way into shoes, baggage, upholstery, garments, and other commodities. Incidentally, for the last thirteen years one customer has taken continuously the entire output of eighteen looms, with no change in the construction of the fabric. J. W. Valentine, 40 Worth St., New York, sells the output of the mill.

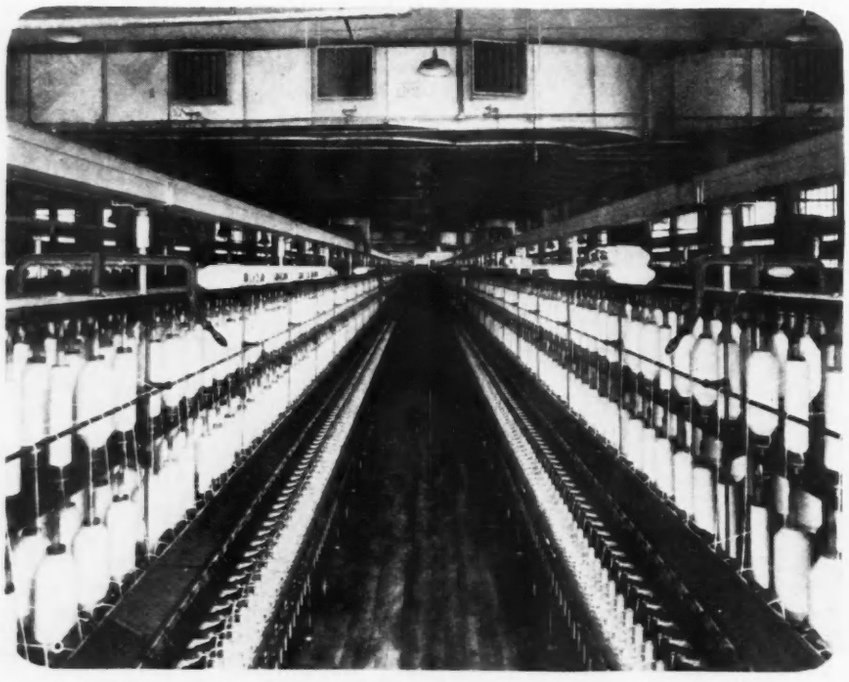
Recently the management of the company inaugurated an extensive modernization program, and much has already been accomplished. Thus far the work has been concentrated largely in the preparatory and spinning departments.

General view of plant of Buck Creek Cotton Mills with office in front

Working conditions have been improved in many ways and up-to-date equipment has been utilized to permit the mill to turn out a better product. In order to realize the full advantages of the modern productive machinery—and at the same time to do everything possible toward betterment of the health, comfort, and morale of the workers—up-to-date air-conditioning equipment was installed.

IN THE OPENER ROOM a Lummus bale-mixer was installed on the bale breaker to permit proper proportioning of the cotton going into the blend. In the picker room the Aldrich synchronized single-process system has replaced the original installation of two-process picking. A Lummus Gyrator cleaning, blending, and distributing machine feeds the three single-process pickers, removing an appreciable amount of foreign matter and insuring a proper blend of staple. The weight of the finished laps coming from the pickers is corrected for moisture variation by use of an Aldrich regain indicator mounted in plain view of the picker tender. This instrument automatically varies the actual weight of the laps to compensate for changes in regain, resulting in fewer gear changes in the card room and assisting in maintaining an even roving.

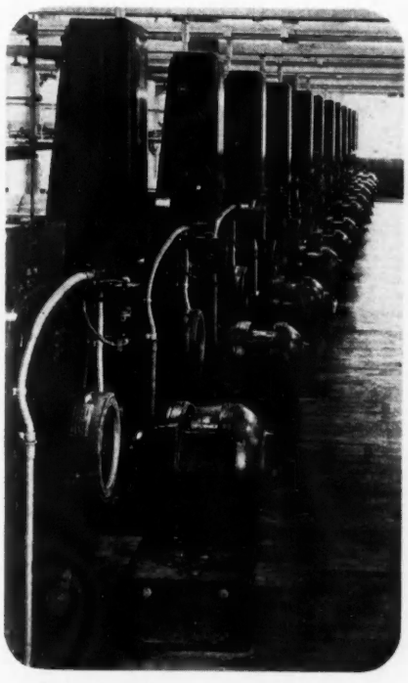
The drawing has been re-designed and rebuilt by the Medley Mfg. Co., Columbus, Ga. Taking one group of frames at a time, all machines were equipped with King's new metallic ball-bearing, self-lubricated rolls and precision type helical gearing throughout. The management states that by the use of this type drawing a more even sliver is obtained and the break factor of single yarn has been increased from 1,750 to 1,950. A sliver variation test showed that the percentage of variation decreased from 37% to 17% after installation of this new type drawing.



Spinning room has been modernized by installation of H & B long-draft frames with traveling cleaners, and complete Parks-Cramer Automatic Airchanger system with Psychrostat controls

High-draft roving, using the H. & B. five-roll scroll system, has been installed. This eliminated two processes in the card room. It also reduces the handling of the roving considerably and, in many instances, allows larger packages to be used in the creels of the spinning frames. At the same time, the quality of the product has been maintained and the production per spindle increased. In the roving department eight 90-spindle, 10x5, Woonsocket intermediate frames were converted to slubbers with the H. & B. system; and six H. & B., 128-spindle, 8x4 roving frames were converted by use of the same attachments. These fourteen frames have replaced a total of 46 frames—slubbers, intermediates, and roving frames—formerly in use, and has resulted in a saving of floor space and better location of machines.

In the spinning room 36 warp and 38 filling frames have replaced the original installation. These are H. & B. American Machine Co. frames of 272 spindles each, 3½-in. gage, equipped with four-roll long-draft system. With the wide gage, long traverse on the bobbin, and maximum size ring, it is possible to put approximately twice as much yarn on each spinning bobbin as was the case with the old frames. As a result of this, together with superior control of humidity in the spinning room, and with the warp yarn having only half as many knots as it had previously, the loom production has automatically increased between 4 and 5%, due to reduction of loom stoppage.



Spinning frames are driven by G. E. motors mounted on Rockwood pivoted-base drives

These frames are all driven by individual G.E. motors mounted on Rockwood pivoted bases, with flat belts.

Throughout the card room and spinning department all machines, with the exception of the cards themselves, are driven by individual motors, no belting being used from overhead shafting.

AIR CONDITIONING—It was realized that only through accurate control of regain could the full benefits be secured from the new machines and processes. Before the modernization program was started, excessive temperatures—in the spinning room, especially—constituted a serious problem in summer months. Here in the Deep South, the temperature occasionally reached 110° F., necessitating shutdowns of the mill.

Several years ago the mill installed a home-made central-station air conditioner supplying both weaving and spinning rooms with fresh washed air. Plans and specifications for this system were drawn up by W. A. Duke, plant engineer, and the entire system was installed by his mechanics. While peak temperatures were reduced, the lack of automatic controls and adequate capacity rendered this system only partially satisfactory.

This installation did, however, serve to convince the owners of the advantages possible with similar equipment of adequate capacity and properly controlled. Accordingly, the following program was adopted: (1) installation of Parks Turbomatic humidifiers in weave room, (2) elimination of all old spray-type humidifiers, (3) transfer of High-Duty humidifiers from weave room to card room, (4) installation of additional Turbomatics to supplement the High-Duty system in spinning room, (5) rearrangement of existing air washer system to serve weave room only, and (6) installation of complete Parks Automatic Airchanger system in spinning room, including heating coils and with new Psychrostat control for both humidifiers and Airchanger.

This system in the spinning room provides circulation of a large quantity of air at all times. The proportion of indoor and outdoor air is governed by both the temperature and humidity existing in the room; the hotter the room, the more outdoor air is admitted, but never to such an extent that humidity drops below the desired point.

Club house in village is center for social activities of employees.

This program, which was engineered and installed by Parks-Cramer Co., has proved thoroughly satisfactory as to performance, maintenance, operating costs, etc., and has materially bettered working conditions for the operatives. "The great advantage of this new air-conditioning equipment," states Mr. Phillips, "is positive maintenance of uniform humidity in all parts of the room at all times, permitting smooth performance of all frames regardless of weather conditions." Relative humidity of 55% is maintained in carding and roving, 55% in filling spinning, 60% in warp spinning, and 85% in the weave room.

Another feature of the spinning room is the ParksTurbo cleaning system. Because of the arrangement of frames, it was possible to eliminate all curves and operate the cleaners on straight tracks only. Each cleaner operates back and forth over three frames. This arrangement means cleaner frames and fewer bunches, and results in a cleaner yarn.

AT SILURIA, a well-kept village of neat, freshly painted homes, with club building, stores, movies, and churches, takes care of the requirements of the 380 employees. Rent in the village is at the rate of 25c. per room per week, which includes water, but does not include light and fuel, both of which are available at reasonable rates. The Alabama

Power Co. has its own lines in the village and sells electric power directly to consumers, while the nearby coal mines, through local dealers, furnish coal at low rates.

The affairs of the village, the social activities of the employees and their families, and the various recreations are regarded as being strictly outside the function of the mill management. The mill does not even operate a company store. The club is managed by a board of directors elected by the employees. Boys' work is in charge of Lloyd Thorpe, a doffer, while Nellie Walton directs the activities of the girls. Albert Guy, a weaver in the mill, is manager of the moving picture theater; Charles ("Chunk") Harris runs the village store and also directs the baseball team, which operates on a "pay as you go" basis. In order to encourage the team, the mill furnishes the park and donates the uniforms.

"We are in the cotton manufacturing business only," said Mr. Phillips in talking over village affairs with the writer, "and leave the outside affairs entirely to our people. We have found this to be a wise policy in all respects." One interesting activity is the Buck Creek Welfare Association, handled entirely by the employees. Each member pays into the treasury of the association 40c. a week, and out of this fund is provided full medical and surgical care, including the services of a regular physician in the village; all hospital expenses; any necessary operations, and complete ear, eye, nose, and throat treatment. This association has been in existence some ten years. To date, 112 patients have undergone operations in hospitals of nearby Birmingham.

Weave-Room Inspection

How often should the weaver stop the loom to check for fabric defects?

This article is based on an investigation carried out in a large southern mill, and was described to *Textile World*'s southern editor by the superintendent. We should be glad to receive further comments from readers who have made tests to determine how often looms should be stopped for inspecting the cloth.

HOW OFTEN should cloth be inspected on the looms? In an attempt to find the answer to this question, observations were made in the weave shed of a southern print cloth mill. It is believed that other weavers will be interested in the facts disclosed by the investigation and in the conclusions drawn.

Approximately 90% of the weaver's time is taken on work other than inspection. The production incentive keeps the weaver's eyes high, looking for standing looms, and a close observation of him will show that the activity necessary to keep the loom running properly does not permit regular inspection on each trip around the job.

Defects commonly found in the weave room of the average print cloth mill are listed in the accompanying table. Incidentally, it will be noticed that the weaver is directly responsible for items Nos. 1 and 2, and is only indirectly responsible for the other defects. The last 20 items are the weaver's responsibility only to the extent that he must notify the section man or overseer. These defects are not due to any fault of the weaver, but to some fault of the loom-fixer, slasher tender, or other person.

In studying the subject of inspection intervals, 252 rolls of cloth were carefully inspected—204 of which were cut for defects. The ratio of total rolls cut to total inspected is 1 to 1.24. This amounted to an inspecting of 230,814 yd. of cloth over the inspecting machines and the finding of a total of 2,290 defects that would not meet the customer's approval. All other defects were so minor as to be of no particular consequence. Based on these figures, there occurred an average of one serious defect for every 100.7 yd. of woven cloth. The cloth was woven at an average speed of 157 picks per min., with a construction of 52 picks per in. and an efficiency of 96.5%. Under these conditions, the average production is 4.88 yd. per hr. from each loom.

FURTHER ANALYSIS shows that 100.7 yd. between defects ÷ 4.88 yd. per loom per hr. = 20.63 hr.—average time that a loom will run between defects. This indicates that inspection of cloth every 6 in., or even every few yards, is not important.

In fact, from the foregoing observations and calculations it appears that on print cloth there is no absolute necessity of stopping the looms for inspection at any time.

With different cloth constructions, loom speeds, and quality of product, there may be another answer to the question of how often should cloth be inspected on the looms. Investigations similar to the one described above should enable one to set up a rule which will prevent unnecessary stopping of looms for this purpose.

Defects Found in Print-Cloth Weave Room

Defect	Number of Defects	Percentage of Defects
End out	4	0.2
Misdraw	12	0.5
Slasher rust	3	0.1
Black oil	38	1.7
Yellow oil	19	0.8
Thin places	867	37.9
Thick places	356	15.5
Bad reed	3	0.1
Ropy filling	55	2.4
Kinky filling	3	0.1
Oily filling	22	1.0
Broken filling	37	1.6
Wavy cloth	16	0.7
Stringy selvage	2	0.1
Bad weave	734	32.1
Overshot	31	1.4
Double thread	11	0.5
Jerked-in filling	22	1.0
Mat-up	36	1.5
Hard size	5	0.2
False change	10	0.4
Hole in cloth	4	0.2
Total	2,290	100.0

Chalk-Finish Bengaline

Combined scour and bleach gives economies; dulling on jig gives further saving

By PHILIP LeBRUN

THE THREE most common constructions of rayon bengalines are the all-rayon bengaline made of high-luster yarn, the high-luster bengaline with cotton filling, and the all-rayon bengaline made of low-luster, pigmented yarn. Regardless of the type of yarn used, the consumer expects a dull, chalky finished cloth with a fairly firm handle. While ordinary high-luster yarns cost slightly less than the pigmented yarns, they are more difficult to finish in the desired matte appearance. However, due to the somewhat lower gray-goods cost and to the fact that the same price is charged by the dyer for finishing both types of cloth, the high-luster fabric is much more in evidence than is the low-luster, pigmented type.

Chalk-finished bengalines are usually handled on a jig. Tension must be kept at minimum, since excessive tension will increase the luster of the yarn. It is impractical in most cases to dye dark shades where a chalk finish is wanted. Blacks, wines, and other dark colors have a natural sheen that is difficult to overcome. When sufficient pigment is used to cover up the sheen of a dark shade, an undesirable grayed effect results.

SCOURING AND BLEACHING—The majority of rayon bengalines go into white. The most economical method of handling white is to combine the scour and the bleach. This is done by adding sodium perborate to the scouring bath. About 10 lb. of perborate is employed for the volume of the bath used in a jig of ordinary size. Treatment for 45 min. at 190° F. will usually result in a good white. When there is an excessive amount of soil and loom grease in the cloth, it is sometimes preferable to bleach the fabric in a second bath. In this case an addition of a small amount of solvent, such as hexalin and pine oil, is made to the scour. This aids in loosening the loom grease and graphite from the rayon. The scour is followed by an end in warm water and a bleach in a second bath containing the sodium perborate and an equal amount of sodium silicate, which acts as a stabilizer and also helps further to scour the cloth. A plain water rinse suffices after the perborate bleach.

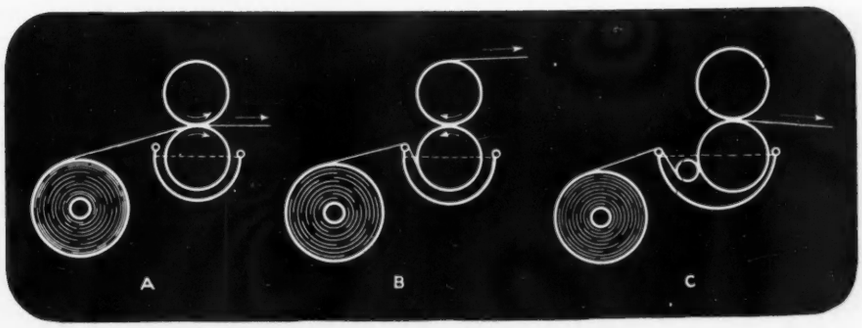
If chemic is employed for bleaching, the usual practice is first to scour the goods at 195° F. in a solution of soap and soda ash, and then bleach in a second bath. After bleaching, the goods are treated with an anti-chlor and given a rinse.

Following bleaching and dyeing the excess water is removed from the goods by means of a horizontal roll extractor. If this type of equipment is not available, a vacuum extractor or a two-roll quetsch can be used, the latter usually being run in tandem with a frame and Palmer arrangement.

DULLING PROCESSES—There is little difficulty in obtaining chalky finishes on pigmented-yarn bengalines, but on fabrics made from high-luster yarns it is quite a problem. There are several means of obtaining the desired dullness or chalkiness on the high-luster cloth. The goods may be chalked by use of an ordinary two-roll mangle equipped with a size pan. However, this method is expensive and dullers, when used in large amounts, tend to cake up on the quetsch rolls. In a short time this results in white size streaks, unless the rolls are cleaned every few pieces. With today's prices the labor cost becomes prohibitive.

An ordinary quetsch is generally made with two knurled brass rolls, which are lapped with cotton cloth. The amount of caking can be reduced by use of rubber rolls, and still further reduced by using an additional roll in the size pan or by reversing the direction of the quetsch rolls (See sketches). In either of the latter cases the bengaline is immersed in the size liquor so that a weaker solution can be used. Reducing the amount of duller in the size also reduces the likelihood of streaks in the fabrics and danger of caking on the rolls.

MOST DULLERS are combinations of insoluble inorganic salts, such as barium sulphate, titanium dioxide, calcium sulphate, zinc oxide, aluminum silicate, etc. The titanium salts are generally considered to be the best and at the same time the most expensive. Aluminum silicate and barium sulphate are the cheapest, but cake most easily. The duller is kept suspended in the size by the aid of gums, such as tragacanth. Titanium dioxide can now be obtained in a state which readily forms an almost colloidal solution and requires no gum to keep it in suspension; however, in the amount necessary to give the desired chalkiness it is expensive to use. As a rule, larger proportions of the cheaper dullers are employed to make up the size in order to keep down the finishing cost.



Two-roll quetsch for applying duller—dotted line indicates size level; *A*, regulation set-up; *B*, reversed-roll set-up; *C*, immersion-roll set-up

Recently there has been developed an organic type of duller which is very effective. However, the cost of this compound prohibits its general use with the present low prices paid for finishing bengalines.

JIG METHOD— While many finishers still use a padder for dulling bengalines, it is more economical to treat the fabric while it is still on the jig. A common method is to impregnate the cloth after dyeing with barium chloride or hydrate solution, about 10 to 15% of the chemical based on the weight of the cloth being used. The fabric is given two ends in as short a liquor as possible. The barium salt is then dropped into a cistern from which it may be recovered for further use, since there is no sub-

stantive action taking place. Without rinsing, the material is then passed through a second bath containing about 1½ lb. glauber salt for every 1 lb. of the barium salt used originally.

It is necessary to give the fabric only one end on the jig in the glauber salt bath, followed by a rinse, to complete the dulling process. Calendering is rarely needed in the finishing of this cloth.

By combining the scour and bleach and then applying the duller on the jig after bleaching or dyeing, the finisher can save time, labor, and unnecessary handling of the goods. All of these savings are of great importance at the present time.

Felting of Hosiery

Cause and remedy of trouble in scouring stockings made from silk and wool

RECENTLY a knitting mill submitted to our Questions & Answers Department a problem of unusual importance. This mill was encountering considerable difficulty, in that a line of silk and wool hosiery made from one end of 1/50s wool twisted with three ends of boiled-off silk felted badly during scouring. The trouble was first noticed when a change was made in the wool yarn. The conclusions reached as to the cause of the felting and the steps to be taken to avoid recurrence of the trouble should be of interest to all knitters using combination yarns.

Since the only change reported by the knitter was in the wool yarn, it was assumed that for some reason the wool itself was the cause of the felting. This yarn consists of one end of Z-twist 50/1 wool plied with three ends of S-twist silk and given seven turns of S-twist.

Comparison of the satisfactory combination yarn previously employed with the unsatisfactory yarn showed that the former is more compact than the latter. (Yarns 5 and 6, respectively, in accompanying illustration.) Both yarns show the wool spiraling about the silk. However, the yarn spiral is less pronounced in the satisfactory yarn, indicating that during doubling and twisting the wool elongated more in the unsatisfactory yarn. In fact, the wool in the unsatisfactory yarn has elongated to such an extent that it has become too long for the silk, resulting in small irregular loops (Yarn 7), instead of a uniform spiral. This excessive elongation is due to the fact that, when the wool is doubled and twisted together with the silk approximately seven turns S, the wool loses its initial twist, and this results in a condition where the wool has practically no twist, allowing the individual wool fibers to slip. That is, after being twisted with the silk, the wool yarn has become a loose mass of untwisted wool fibers. (See Yarn 4.) Wool in this condition felts very easily.

IT IS EVIDENT that the behavior of the wool during twisting with the silk is the cause of the felting during processing. It is always a delicate procedure to double and twist together spun yarns, because during the operation not only are the yarns twisted about one another, but also each individual yarn is twisted about itself. It is essential that the twist of the individual yarns and their behavior during plying and twisting are thoroughly understood. There is always the danger that when combined and twisted in the direction opposite to that of the initial twist in the spun yarn (in this case the 50/1 wool), the spun fibers will assume a parallel position, yielding a weakened yarn. That is what has happened in this particular case.

In order to illustrate this fact more clearly, several 10-in. lengths of the plied yarn were placed in a twist tester and the twist was removed. When all the twist was removed and the wool and the silk yarns were parallel, they were substantially in the condition they were in before being plied and twisted together. Yarn 1 represents the satisfactory wool yarn at this stage; Yarn 2, the unsatisfactory yarn.

Next, additional samples were placed in the twist tester, and the twist was removed as above. The silk yarn was cut away and the same amount of twist was put back into the wool yarn. Yarns 3 and 4, respectively, represent the satisfactory and unsatisfactory wool yarn. At this stage the yarns are in the same condition as in the plied yarn.

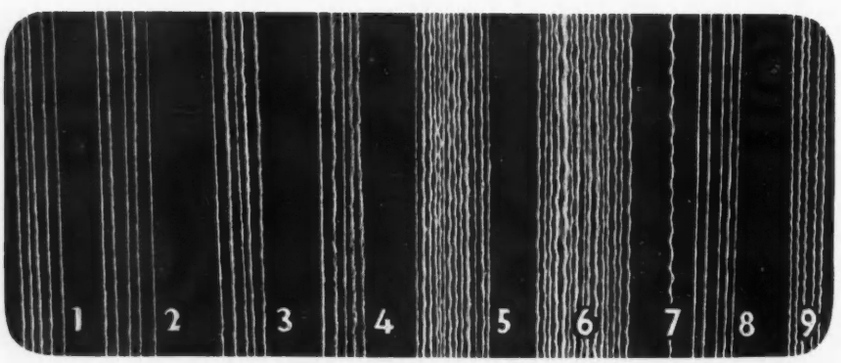
Four out of five samples of wool from the satisfactory yarn showed an elongation of approximately ⅜ in. in 10 in., or approximately 4%. It was impossible to measure the elongation of the wool in the unsatisfactory yarn, as all samples tried slipped apart when measurement was attempted.

Knowing that felting is due to the condition of the wool in the plied yarn, one can solve the problem in various ways.

The unsatisfactory plied yarn still on hand can be given a further twisting of seven turns S. This will yield a more compact yarn in which the wool is in a much better condition to resist felting (Yarn 9).

If the wool has not yet been combined with the silk, a doubling and twisting of seven turns Z will yield a compact yarn which will not felt (Yarn 8). This type of yarn will not be quite so soft as the satisfactory combination yarn previously employed.

If the wool has not yet been combined with the silk, a yarn approximating the satisfactory yarn can be made by twisting the wool itself five turns Z and then doubling with the silk and twisting seven turns S.



Satisfactory and unsatisfactory yarns

Variations in Woolen Roving

Can be reduced by close attention to the card setting and processing details

By G. MARSHALL

CORRECT BLENDING is the foundation on which all satisfactory woolen fabrics are built, and use of a suitable lubricant in correct quantities is also of vital importance, but many defects are traceable directly to the carding operation. Important among these is variation in the counts of condensed roving and therefore in the spun yarn. Variation in counts may be between the same rovings over a period of time, or between rovings across the width of the card, or between the different spools of a tape or double-doffer condenser.

Variation of the roving in successive lengths may be due to faulty weighing of the stock at the hopper feed, faulty design of the hopper, its incorrect setting, or its not being kept filled to one constant level. Successive weighings of material may be deposited on the feed apron at incorrect intervals; there may be slippage of feed apron or belts particularly main driving belts. Incorrect setting of various rollers may result in their wrapping, or in the cards taking up too much stock after stripping.

The remedies for these faults are, first, to see that a modern type of hopper is used wherever possible; and then to attend to the details of its setting. Every hopper should have a sensitive scale pan which has only a small distance to move between the raised and lowered positions; a positive stop-motion for the spiked lattice, which should operate as soon as the pan begins to move; and a shutter which operates at the same instance. The leveling comb of the hopper should be set as close as possible to the spiked lattice, in order to prevent stock going over in lumps; and the lattice should be run as slowly as is consistent with getting the proper weight of stock in a given period of time. The brush should be set to keep the lattice clean.

If the scale pan is kept as full as is reasonable, percentage variation between weighs will be reduced to a minimum. If the stock in the hopper is kept at a constant level, weighs will likewise be more constant. If the tipping mechanism is timed correctly, successive weighs will be placed on the feed apron at correct intervals; that is, without leaving gaps between weighs or having them encroach on each other.

Slippage of belts can be reduced to a minimum by keeping them reasonably tight, by keeping them clean, and by having the pulleys wrapped correctly. Wherever possible, crossed belts should be used for main drives; for motor drives, chains or V-belts can be used successfully.

Failure to keep the hopper filled to a constant level may cause variation in roving

EXCESSIVE TAKE-UP of the cards after stripping can be prevented by making certain that workers and strippers are kept perfectly clean, by the use of suitable fancies, and by correct setting and speeding of these rollers and the doffers to keep the main cylinders clean. When a machine is working most efficiently, the strippings should consist of grease and dirt and not of good material. When the cards are taking up, the machine must be allowed to run to waste until the counts are correct, or until allowance is made by adding a tooth to the doffer gear.

Variation from side to side of the machine is caused on the finisher card, and is a very prevalent fault. It may result from incorrect setting of the overhead portion of the Scotch feed, incorrect laying and folding of the sliver by this feed, dirty or incorrectly set feed rollers, uneven settings across the machine, or uneven condition of the cards. The stock may be thrown unduly by the fancies, or may be run to one side of the machine by the strippers and angle strippers, or the mouth of the tape or ring doffer may not be open the same amount all across the machine.

For some of these faults the remedies are obvious; but the following points should receive attention. The overhead should deliver from a point which is central, and the slivers on the apron should overlap correctly. Strippers and angle strippers should be ground to enable them to hold the stock; when renewing the fillet, it is advisable to have the strippers wrapped alternately from the right and left sides to minimize the risk of the stock running with the fillet. By the use of fly strippers, fancies must be prevented from throwing excessively. Plates up the sides of the machine will prevent air currents from deflecting the stock and will help to keep it in the machine.

VARIATION between the spools of a tape condenser is more common on the series than on the endless type of machine. It is generally due to varying tensions of the tapes feeding the different spools. At times individual tapes are stretched by wrapping around lickerin rollers; this results in small ends.

To cure the first fault, set the tapes carefully, then check counts and make any necessary adjustments. In the case of the second, tapes which are slack must be cut and shortened.

On double-doffer condensers, the top doffer tends to take more than its share of material. For most blends it is advisable to set the doffers both alike and correct any difference in counts by speeding up the top doffer. The strippers on both doffers must be set alike, so that the mouths of both doffers are kept in exactly the same condition.

If sufficient attention is paid to details, it is possible to keep variations within reasonable limits.

(A continuation of this discussion, in an early issue, will deal with other faults in woolen carding.—Editor.)

Abstract of a paper delivered before the Dewsbury Textile Society, England.

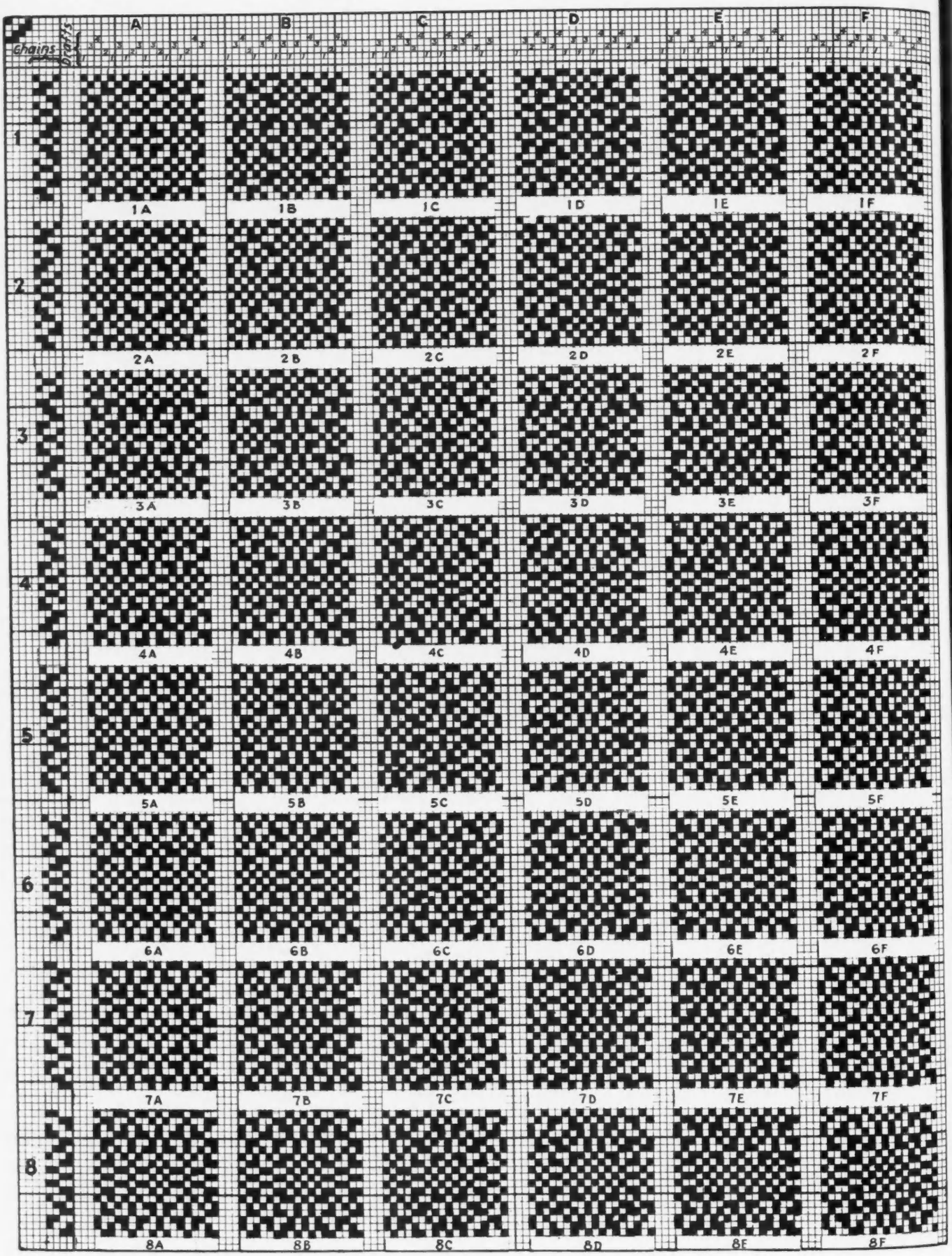


Fig. 1. Illustrating method by which 144 designs based on two-up, two-down twill can be produced in six-section weave blanket

144 Different Fabric Designs

All usable, can be woven in a four-harness, six-section weave blanket

By WILLIAM HIGGINS

THE PRIMARY PURPOSE in making color or weave blankets in which there are many contrasts between the various warp and filling colors is to show the beauty of those contrasts to best advantage. Yet, it sometimes seems, many designers by using a weave such as a two-up and two-down twill, instead of weaves that will really help to enhance the natural beauty of the colors, pass up the opportunity of developing these contrasts to the fullest possible extent. The object of this article is to describe a method by which such weaves can be produced and utilized.

Granted that a color blanket must also act as a basic fabric to show the weight, finish, handle, etc., of the proposed cloth, it is still possible for one to design fabrics which will do all those things, and yet contain new and intricate weaves which will show off the yarn colors to good advantage.

The weight of a fabric is determined by the size of the yarns used, the ends and picks per inch in the finished cloth, and the take-up in weaving. Introduction of novel weaves need not materially change the finish or handle of the fabric, but can greatly improve its appearance.

THE DIFFICULTY in producing weave blankets lies principally in the difficulty of having every section of the blanket a true weave with every chain used. At times it is required to have several weaves of entirely different construction in the same blanket. This requires the use of a large number of harness. At other times, a particular weave is required in one section of the blanket, but in the other sections the designer is allowed to use his imagination.

In dealing with the latter case, let us assume that it is desired to reproduce, in one section of a blanket, a fabric having weave *1A*, as shown in the upper-left corner of Fig. 1 (on opposite page). By further analysis it can be determined that the weave, drawing-in draft, and harness chain are based on a two-up, two-down twill motif, using draw *A* and chain *1*.

It is a simple matter to produce a variety of drawing-in drafts, using the same number of ends as in draw *A*. Examples of such draws are shown at *B*, *C*, *D*, *E*, and *F*, which appear across the top of the illustration. From these drafts, chains *2*, *3*, *4*, *5*, and *6* may be constructed. Thus, we have design data sufficient for a six-section blanket with six chains.

To make completely clear the illustration of the woven blanket represented by the page of weaves, it may be best to explain how the first six chains were derived. Chain *1* was made by arranging the picks of the motif in the same numerical order as the drawing-in draft *A*. In other words, the first, or top, pick of the chain is like the first, or top, pick

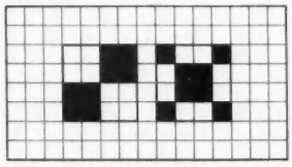


Fig. 2. Two forms of two-and-two basket weave can be used as motifs

of the motif; the second pick of the chain like the third pick of the motif; the third like the fourth; the fourth like the second; etc., across the entire draft. Chain *2* was constructed in a similar manner, but on the basis of draw *B*. Chain *3* is based on draw *C*; *4*, on *D*; *5*, on *E*; and *6*, on *F*.

Now if one should draw a vertical line from any one of the drawing-in drafts, and a horizontal line from the corresponding chain, the intersection of the two will indicate the true weave for that particular draw and chain. All weaves having *A* as a part of their number are derived from draw *A*. Likewise all weaves having *1* as a part of their number are derived from chain *1*. The true weaves are *1A*, *2B*, *3C*, *4D*, *5E*, *6F*, *7A*, and *8F*. The others are mongrels or cross-weaves of these drawing-in drafts and chains.

FOR AN ENTIRELY different set of chains —which will in turn produce a new set of weaves—it is only necessary to build six additional chains in which the fourth harness replaces the first, the first replaces the second, the second replaces the third, and the third replaces the fourth. Chain *7* is the result of rebuilding chain *1* according to the foregoing plan. Chain *8* results when chain *6* is similarly rebuilt. These are shown merely as examples, and interested readers can easily construct for themselves the chains which would result from the rebuilding of chains *2*, *3*, *4*, and *5*.

A third and a fourth set, each containing six still different chains, can be laid out by extension of the harness-replacement technique employed in constructing the second set. Thus would be indicated the fact that 144 different weaves can be constructed on the basis of the original six drawing-in drafts and six harness chains.

As a matter of actual practice, however, it is recommended that only the first two sets of chains developed be used. But one need not stop with the above if a large number of designs are desired from the same drawing-in drafts. Two forms of the two-and-two basket weave, as shown in Fig. 2, may also be used as motifs to produce six other chains each. The designer may then weave all the chains: the twelve based on the two-up and two-down twill, the six made from the two-and-two basket, and the six made from the second form of two-and-two basket; this would produce a blanket containing 144 different weaves, all usable as basic weaves for sample cuts.

STRIPING EFFECTS to vary the appearance of the fabric could be tied in if the designer cared to, and it appeared advisable. These stripes could be overchecked by inserting picks of the same materials at predetermined intervals. All the weaves lend themselves to striping because of the number of ends that cut, or weave opposite to one another.

As the weaves in each case are for the same number of ends and picks, and are all based on rearrangements of draw *A*, it will be found that all of the weaves are symmetrical. The whole fabric has a somewhat similar construction, because the interlacings of any one warp end do not vary greatly from the interlacings of any other end in any of the designs. Hence, the entire cloth will finish similarly.

Is Silk Rise Ended?

ABROGATION of the U. S. commercial treaty with Japan, effective in six months, gave a set-back to raw silk just as it had passed its former highs and seemed on its way to $3. On July 26 the Japanese market touched 1305 yen for Grade D and the New York price was $2.77. On the treaty news, Kobe dropped about 25 yen, New York futures 10¢. Feeling in the trade, however, is that no real change in status is in sight. Whether we have definitely missed $3 silk remains to be seen.

Japanese silk authorities who have visited this country in the last few months take quite placidly to suggestions that the American market would be better off with $2 silk, and they have indicated no sympathy with a runaway bull market. However, they point out that there are certain facts behind the increased price of silk, which are not likely soon to be changed.

They point to the smaller crop of cocoons in 1938, to a sort of semi-famine in textile raw materials in Japan due to import restrictions on wool and cotton, and, finally, to the influence of inflation in Japan on all commodities. Total visible raw silk stocks fell from 149,000 bales at end of 1938 to 60,000 at end of June. During the period of high prices, users in this country have been buying cautiously, probably from hand to mouth, and there is believed to be considerable need for silk accumulating as buyers hold back their purchases for definite recessions. Mills which hesitated to take on much silk at $2.75 would probably buy in considerable quantity if and when the price went down to $2.50. There is thus a background of potential demand which seems to make it likely that the situation is well stabilized.

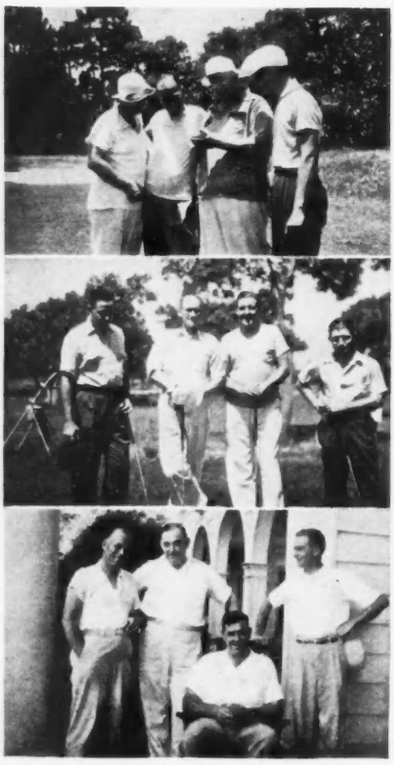
Further, strength in raw silk seems to come at a particularly inappropriate time when the full-fashioned hosiery industry, its principal mainstay in this country, is having a hard fight to get small price advances to meet the earlier stage of the raw silk up-swing. Also, there is now a definite movement toward the use of finishes to increase durability of silk hose which in turn may reduce the annual turnover of hosiery and consequently the annual consumption of raw silk. The forthcoming stronger and more elastic synthetic fibers are another threat to silk. Weavers of silk fabrics, except on highest price specialties, have turned to synthetics, and they started to turn when silk went over the $2 mark.

It seems an obvious conclusion that high levels will bring curtailment of American consumption to the ultimate (but distant) detriment of those interested in silk as a trading commodity.

Fun for the Chemists

GOLF, BRIDGE, horse races, fishing, surf bathing, and the accumulation of many coats of sun-tan occupied the time of members and visitors, including wives, attending the summer outing of the Piedmont Section, American Association of Textile Chemists and Colorists at Myrtle Beach, S. C., June 23 and 24. Over 300 were on hand.

Generous prizes were awarded winners of the various contests. Miss Katherine Wolhar, Roanoke Rapids, N. C., captured the ladies' bridge prize, while golf prizes for the three flights in the golf tournament went to A. T. Lomax and John Neely in class A; A. F. Beane and L. J. McGinty in class B; and J. W. Ivey and W. W. Trowell in class C. Arthur Campbell, who encountered many difficulties on the trap-infested course, was awarded the consolation prize.



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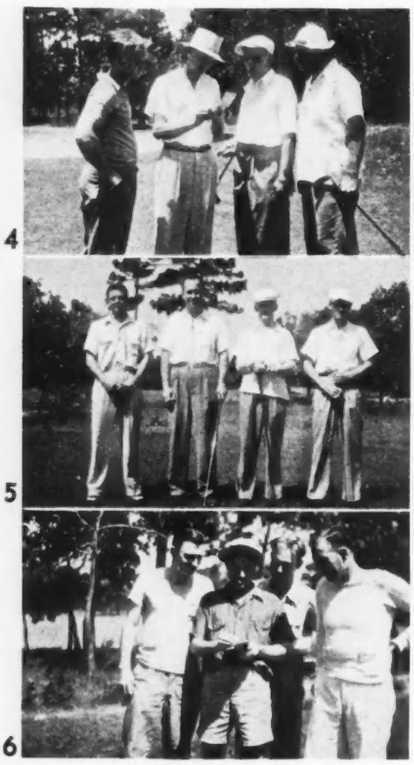

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1. McGee Calhoun, Ware Shoals (S. C.) Mfg. Co.; Harral Pierce, Solvay Sales Corp., Charlotte, N. C.; Sam Hayes, Ciba Co., Charlotte, N. C.; Bob Pierce, Charlotte, N. C. **2.** Toots Causey, Solvay Sales Corp., Charlotte, N. C.; Guy Morrison, Penick & Ford, Spartanburg, S. C.; Bert McIntyre, National Oil Products Co., Charlotte, N. C.; C. O. Stevenson, Ciba Co., Charlotte, N. C. **3.** Harral O. Pierce, Solvay Sales Corp., Charlotte, N. C.; Wm. A. Wolhar, Supt., Bleaching, Dyeing & Finishing, Rosemary Mfg. Co., Roanoke Rapids, N. C.; Henry Gaede (seated), Laurel Soap Co., Charlotte, N. C.; D. Stewart Quern, Buffalo Electro-Chemical Co., Charlotte, N. C.

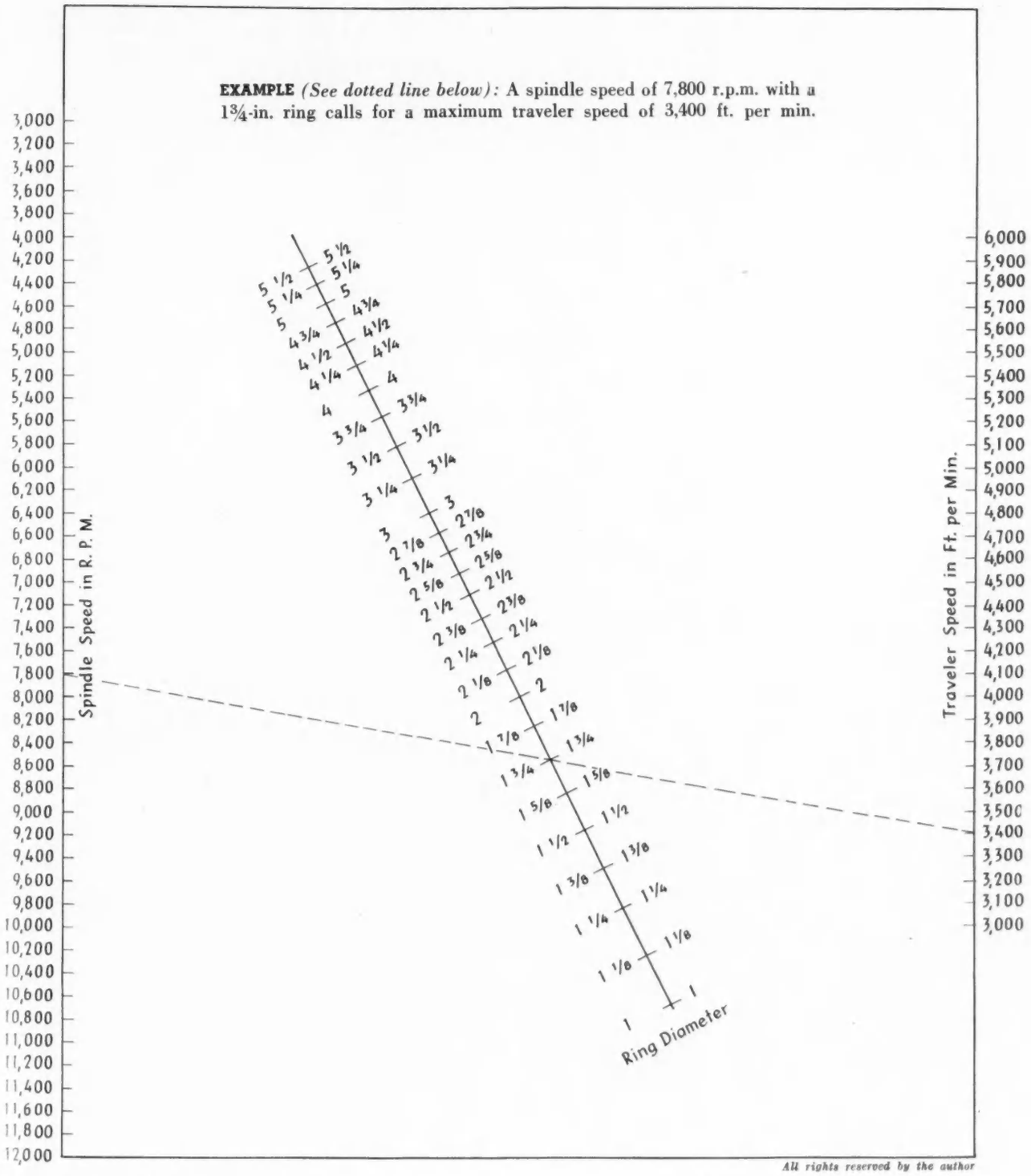
4. R. T. Mallory, N. C. Finishing Co., Yadkin, N. C.; Stewart Queen, Buffalo Electro-Chemical Co., Charlotte, N. C.; Arthur Campbell, American Cyanamid & Chem. Co., New York; Hugh Puckett, American Cyanamid & Chem. Co., Charlotte, N. C. **5.** Fred Jerauld, Buffalo Electro Chemical Co., Buffalo, N. Y.; Dick Tuttle, Supt., Marshall Field & Co., Leaksville, N. C.; J. Beacham Wray, Marshall Field & Co., Leaksville, N. C.; C. B. Griffin, Penn Salt Mfg. Co., Philadelphia, Pa. **6.** Chas. Gunter, Mooresville (N. C.) Cotton Mill; Howard Sprock, Geigy Co., Inc., Charlotte, N. C.; Alex Campbell, Westboro Weaving Co., Greenville, S. C.; Jas. Procter, Mooresville (N. C.) Cotton Mill.

Nomograph for Traveler Speeds

By S. V. MEHN

THIS CHART should prove useful in planning installation of new spinning frames and twisters, ring sizes and spindle speeds of which are to be different from those of existing machines. Also, it should be useful in checking as to whether machinery in place is being operated at maximum traveler speed. In using the chart to determine maximum traveler speed, place a straightedge at the operating spindle speed at the left, so that it passes across the ring diameter being used, to the traveler speed scale.

SEE EXAMPLE BELOW



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Winding Hosiery Yarns

Knitters benefit when throwsters employ proper methods for silk and rayon

By WALTER R. RICHMOND

NEARLY ALL gum-silk yarn thrown for knitting hosiery, is wound on paper cones. These paper cones are 5°57′ and 3°30′ taper, 5¾-in. long for winding with a 5-in. traverse. Orders for new machines tend towards the 3°30′ taper, using a 5-in. traverse on the leg yarns, and 6-in. traverse on the welt yarns. The regular shaped cones are generally 2¼ or 2½ wind, with some knitters preferring the honeycomb wind.

Although a great many mills are still using the 2¼ wind, the 2½ wind is recommended. The objection to the 2¼ wind is that the traversing parts are speeded up. Because of this, the spindle speed should be reduced, but the mills do not want to reduce spindle speed, and thus lose production. The 2½ wind changes the angle of the lay of the yarn slightly, but builds a very satisfactory cone. When a 6-in. cam is used, the mill should have a 2¾ wind, which would give approximately the same lay as that obtained from 2½ winds and a 5-in. traverse. The 6-in. traverse is employed more for the heavier yarns used in the tops of the stockings, and the 5-in. traverse is employed for the 2- or 3-thread yarns used in the leg.

The pineapple cone is used with 5°57′ and 3°30′ taper. One advantage of the pineapple cone is that it is easy to handle and to ship without damage. In addition; the outer layers of yarn hold in place and are not likely to "shell-off."

With the honeycomb wind, which is also called square-end cone, "topping" or "shelling-off" of the outer layer of yarn is likely to occur. Likewise, it is difficult to wind square-end packages without a little bulge on the nose or base end. As the knitter expects to receive packages that are almost perfect in appearance, it is frequently necessary to rewind the square-end packages merely to improve appearance.

Increased use of high-twist silk is probably responsible for the trend away from the 5°57′ taper toward the 3°30′ taper cone. One benefit of the 3°30′ taper is that the hard-twisted yarns do not roll down from the base end of the cone and pile up toward the center of the cone when starting a new cone. There is also less variation in the diameter of the package from the nose to the base end, and, therefore, tension in winding is more uniform. The average diameter of the bare paper cone with 3°30′ taper is larger than the average diameter of a 5°57′ taper cone. This larger diameter gives a higher average yarn take-up speed, which increases the production of the winding spindle when using the 3°30′ taper. In the case of silk yarn that is wound soft, the knots can be placed inside the cone. On the other hand, if the cones are hard, with a densometer reading of around 50 to 55, the knots should be placed on nose of cone.

THE HONEYCOMB WIND consists of small, open diamonds which permit the moisture to penetrate readily in setting the twist and conditioning the yarn. However, as the honeycomb wind loses moisture rather quickly, and many of the crossings of the diamonds set with hard and narrow gum markings that cause irregular unwinding, it is not usually considered a satisfactory package for silk knitting yarns, although a few knitters still prefer it.

Ingrain hosiery yarn or degummed silk yarn usually has a low twist and is generally wound damp on an 8°30′ taper cone with a felt covering. As the moist ingrain yarn clings tightly to the cone, a greater taper is required to permit the yarn to unwind freely. To prevent split filaments, chafing, and overtight winding, many mills are still using disk tensions instead of metal or porcelain washboards, although disk tensions probably are not necessary. Mills are now getting away from wet winding, because of improvements in the methods employed for setting the twist of the yarn on spools before winding. With low-twist yarn, it is not difficult to set the twist, and it appears to be more desirable to do this on the spool rather than at the winder.

A dry atmosphere causes hard-twisted gum-silk yarns to wind very irregularly and produces many over- and under-wound cones, which affect the knitting production and cause excessive waste. Proper humidity is, therefore, essential to production of good cones. A temperature of from 70 to 75° F., with a relative humidity of from 65 to 70%, gives good results. It is necessary to maintain the relative humidity when the mill is idle. Otherwise, when the stock on bobbins is permitted to get too dry, the yarn winds very irregularly.

Cleaning is now a general practice in cone winding silk yarn. Some throwsters use two cleaners—one before and one after the washboard tension. The cleaners are of many kinds and shapes, with cleaning faces 1/16 to 1 in. in width. The following are the settings frequently used:

2 and 3	thread	0.0035 to 0.004 in.
4	thread	0.0045 to 0.005 in.
5 and 6	thread	0.005 to 0.0055 in.
7	thread	0.006 in.
8	thread	0.007 in.
10	thread	0.008 in.
11 and 12	thread	0.100 in.

As low-twisted yarns are less dense or more open and full, they require wider openings.

SETTING OF TWIST is a necessity in cone winding gum-silk twisted yarns. Otherwise the yarn tends to return to its untwisted state, and, when the yarn becomes slack, it kinks or snarls to such an extent as to make it unwindable. Steam and hot vapor are usually employed to set the twist in gum silk yarn. The moisture softens the sericin and makes it plastic and swells the yarn. The heat contracts the yarn, bakes the sericin hard, and this holds in suspense the force which causes untwisting.

The silk is usually steamed on spools. As cone winding breaks part of the set, it is good practice again to set the yarn on cones, particularly so on yarn with but one-way twists, like tram, or with yarn having both S and Z twists, unbalanced in torsion.

The yarn may also be unset in transportation; for example, when it is shipped on a rainy day and reaches the knitter before it dries again and sets. Such yarn can be set properly by putting it in a drying room at about 150° F. or in a regular setting cabinet.

There are three types of twist-setting equipment in general use. These are:

1. Steaming rooms. In this method steam is used to wet the yarn. When the steam is shut off, the heat dries the yarn and thus sets the twist.

2. Vacuum chambers. In one type of vacuum chamber steam is used and a vacuum created in the chamber by a pump; the process is hastened by exhausting the air from the yarn and

drawing in the steam. In another type the vacuum is created by a flow of cold water around the chamber containing the steam and silk.

3. Vapor cabinets. In this, the most modern method, the heat and relative humidity are automatically controlled. As a result, there is no deposit of free moisture on bobbins to cause hot water marks to melt the gum and leave dull spots or short dull lines in the hosiery; and the hot vapor is not nearly so harmful to fiber-head bobbins as is steam. The temperature ranges from 158 to 165° F. and the relative humidity from 90 to 95%. There are two methods of operating the vapor cabinets. First, keep the yarn continuously in cabinet from ½ to 1 hr., as required by torsion of yarn. Second, set the yarn 15 min., cool 10 min., and repeat the process as often as required. The second method produces a better set when properly handled.

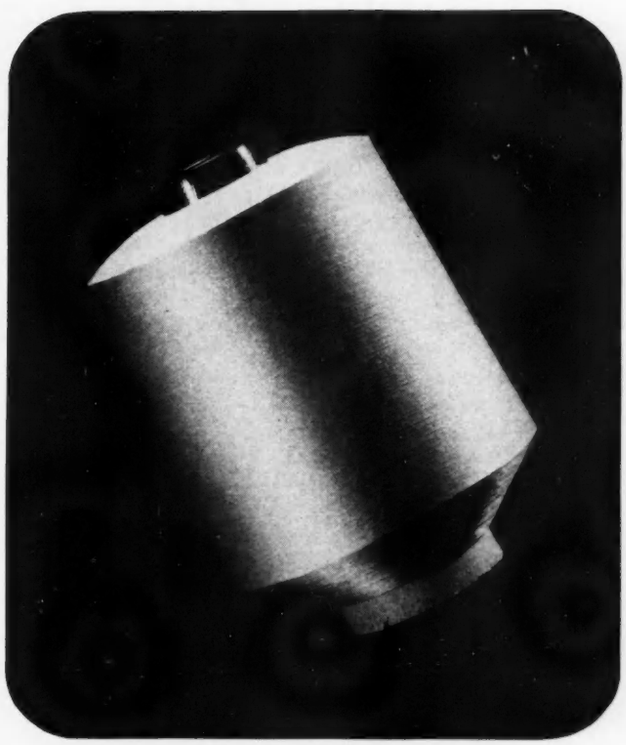
A yarn is considered well set when the body of yarn on the bobbin moves on the barrel. Care must be taken, however, that it does not shrink away from the head so far that it affects the unwinding of shaft or bobbin, as that is unnecessary.

In setting the twist on cones, one should not use a steaming room, as it softens the paper cones and causes them to crush. The cones should not be kept in vapor cabinet longer than 10 min. If they need more setting, cool first and repeat the process. Specially impregnated, hard-paper, perforated cones are now available for conditioning, and perforated metal cones are also made available.

When the yarn is conditioned in a room from 24 to 48 hr. before knitting, the knitters prefer a cone with a density of from 40 to 50. When the yarn is taken directly to the knitters, a density of from 50 to 60 is preferred.

Pairing of cones for size in knitting is still a moot question, the important point is uniformity in density. As to tension, chromium-plated metal washboard tensions are taking the lead, as they are very sensitive, wear well, and do not chafe the yarn. Porcelain tensions are still used; the four-piece type gives better service and wear.

THE DEFECTS made in cone winding are split threads, chafed yarn, bad knots, loose ends, and underwound cones. Split threads are probably caused by too much pressure of the traverse frame back against the package. The thread guide in contact with the cone traverses from one end of the package to the other as the package revolves on the spindle. Cut guides, cleaners, and washboards may cause split threads and may also be the cause of chafed yarn. Bad knots may be due to tying a round instead of a flat knot, failure to lock the flat knot, cutting the ends too short, and leaving waste in the knot. Some throwsters believe that loose ends are caused by tying the knot with the thread



Well-wound cones free from defects are essential to good knitting

at too great an angle to the traverse guide eye and causing the thread to become loose and form a loop when the spindle is started, catch in the traverse, and break. Loose ends may be caused by tying the knots too short and opening when made wet by wicks.

In most cases, however, it appears that loose ends have more to do with proper control of tension. If a pluck occurs when winding from a spool, it will have a tendency to open the tensions. When the yarn is released, the tensions will snap together and there will be a moment when the yarn will not be under tension. This yarn, which is wound loosely on the cone, will form a loop. If the loop is at the base of the cone, it will slide down, and the thread guide will catch it the next time around and break the yarn. The cause of loops has been the subject of discussion for years, and every one has a different opinion on the matter. It is certain, however, that the yarn is cut after it gets on the cone, as there is not opportunity for the breakage lever to act, which would stop the spindle. Therefore, it seems likely that loops are formed by slack yarn, indicating that the tensions had been snapped open when a pluck occurred from the supply package. Short traverse is frequently the cause of slack yarn.

Some throwsters believe that silk yarn twisted in "Z" direction does not balloon so much as yarn twisted in "S" direction when unwinding in yarn boxes, and this causes less slack yarn and less kinking. However, when knitting from cones, the yarn is going very slowly and it does not seem possible that anyone could check the difference in the ballooning of the yarn when using "S" or "Z" twist yarns. In either case the yarn is wound on the cone in the same direction. Therefore, if the twist is properly set, there should not be an internal force in the yarn that would have enough control over the ballooning of the yarn to make any difference.

WINDING RAYON. The cone winding of rayon requires more care and closer attention than does that of gum silk yarn. The tension must be light, so as to prevent overstretching the yarn, particularly so on the finer sizes, such as 50 denier and under. The tension and guides must be removed when slightly cut.

Drawing the yarn tight to the top of cone often causes shiners. A shiner is generally found next to the knot, and consists of slack twist that has been caused by the operator, either in stretching the yarn too much or by moving part of the twist out beyond the knot before it is formed.

As the rayon is smoother than gum silk, it rolls more and proper humidity is very essential for good winding; on the other hand, care must be taken not to get the humidity too high, as the yarn weakens and over-elongates in a highly humid atmosphere. An excessively high humidity causes the yarn to wind too tight and sometimes causes it to stick in unwinding.

Functional Finishes

New trend in textile processing offers real opportunity for profits

By WINN W. CHASE

Associate Editor, TEXTILE WORLD

THE IDEA of treating a fabric to make it shrinkproof, water-repellent, crease-resisting, mothproof, etc., is not new; but until recent years satisfactory processes for accomplishing these results were not available. Today, thanks largely to development of new textile chemicals, it is possible to obtain a wide variety of finished effects which make the fabrics better fitted to some particular use. This is true of both woven and knitted fabrics made from any of the natural or synthetic fibers. Many of the newer functional finishes are not removed by laundering and dry-cleaning, and can be classed as durable or permanent finishes.

With some few exceptions, these new special finishes are more expensive to apply than are the older conventional types of finishes. This means that the finishers must obtain higher prices for applying them.

Finishing prices in general have been at such a low level for several years that it has been impossible for either the cotton or the silk and rayon finishing industry as a whole to operate at a profit other than in brief periods when activity has been above normal. It has become apparent that the only way to put the industry on a profitable basis is to increase finishing charges. The writer believes that the development of functional finishes has afforded the industry an unparalleled opportunity to do the one thing which is essential if it is to get out of the red.

In a highly competitive industry it is most difficult to increase the price of any staple commodity over that to which the purchaser has become accustomed. Rather, there is a constant pressure for lower prices. It is possible, on the other hand, to set any reasonable price on a new product of real merit for which there is a consumer demand.

There is no doubt that functional finishes are new, that they add greatly to the value of the fabrics to which they are applied, and that a consumer demand for them can be aroused. However, it will require considerable effort on the part of the finishers, as individuals and as a group, if they are to make the most of this opportunity.

First, there is need for a great deal of technical research. In the past the finishers—the job finishers, particularly—have been content for the most part to apply any type of finish ordered, frequently without knowing the ultimate use to which the fabric was to be put. It is essential for the finishers to make a thorough study of the conditions to which various types of fabrics are subjected during use, and then to develop finishing methods which will give the fabrics those properties which are desirable from the consumers' viewpoint. Towelings, for example, should be soft and absorbent; yet today they are frequently given a stiff, starch finish. Research on evaluation of finishes—already started in a small way—should be expanded and hastened. In many instances, a change in fabric construction, as well as application of a specific type of finish, is necessary if a new product is to be developed to best suit a given use; hence, the finisher should encourage the cooperation of the gray mill.

MERCHANDISING. Second, the new functional finishes must be vigorously merchandised. This does not mean just a few sporadic advertisements in trade papers read by converters, but an extensive sales-promotion campaign designed to create a demand by retailers and consumers for a specific type of finish.

Some of the larger companies may find it advantageous to promote under their own name certain specific finishes which they have developed, particularly if they license other companies to apply these finishes. On the other hand, there probably are not many individual finishers who can afford to conduct a sales-promotion campaign on the scale that is necessary to make it effective.

Fortunately, the fact that the individual finisher may not be able to spend a large amount of money on either technical development or promotional work does not prevent him from profiting from this trend toward functional finishes. It is possible for him to obtain licenses to apply a number of the finishes which have been developed in the last few years by other textile companies or by manufacturers of textile chemicals. In several instances the companies which control these processes are sponsoring sales-promotion campaigns, including national advertising in consumer publications. Likewise, licensing agreements are such as to guard against unfair competition among licensees and to insure control of quality.

An eight-page article in the current (August) issue of *Good Housekeeping* is a good barometer of the increasing interest among consumers in functional finishes. In that article entitled "Fool-Proof Fabrics," there is a discussion in a popular vein of at least six different types of functional finishes which are being applied under various brand names to apparel fabrics. Thirty department stores in as many cities in twenty States have stocked garments made from these fabrics and promoting them as a group this month. A number of the stores have arranged to carry a special group of treated fabrics in their piece-goods departments in coordination with the activities of their apparel departments. Salespeople in both departments have been supplied with literature describing the advantages of the finishes.

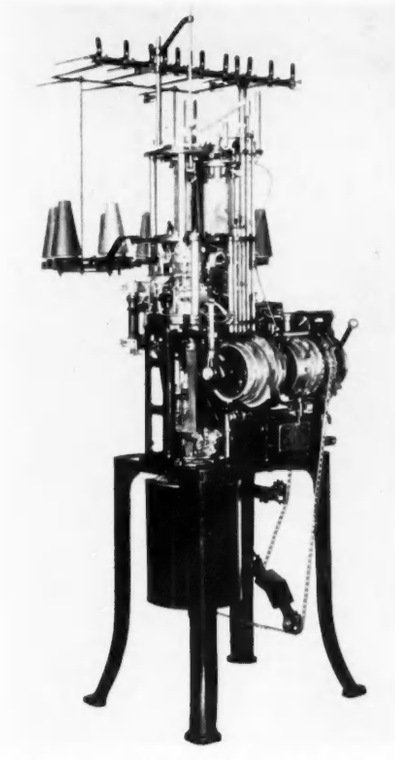
An example of an industry-wide sales-promotion campaign is the highly successful one carried out by the Velvet Guild. Three years after the start of this campaign the consumer demand had become so great that virtually the entire output of the transparent-velvet industry consisted of crush-resistant fabrics.

Technically the finishing industry has entered a new era—the era of functional finishes. Whether or not the finishers make the most of the profit-making possibilities of these new finishes is up to themselves.

★ ★ ★

An important trend in the textile industry during the last few years has been the development of special finishes which are designed to render a fabric more suitable for a specific use or uses. These finishes—which were referred to as "functional finishes" by the present author in our Annual Issue—are of interest not only from the technical viewpoint, but also from the viewpoint of management and sales. Properly merchandised, they offer progressive finishers a real opportunity to make substantial profits.

TEXTILE EQUIPMENT NEWS



Links-and-links hosiery machine (Scott & Williams)

Links-and-Links Hosiery Machine

Announcement of a Komet links-and-links hosiery machine has been made by Scott & Williams, Inc., 40 Worth St., New York. The machine, adapted for men's, women's, and children's hosiery, is capable of producing all links-and-links patterns in combination with double feed and plating, including three-color work. Any combination of ribs and different combinations in different portions, ribbed to the toe, can be obtained.

It is stated further that any type of hosiery yarn can be knit successfully. Some of the hose which can be knit are men's half hose, men's slack socks with or without self-supporting tops, crew socks with as many as five colors for stripes, women's and children's anklets, boys' 5/8 hose with links-and-links patterns or broad ribbed with turned-down cuffs.

The machine is fitted for 18 steps of patterning and has 36 racks. Pattern changes are readily effected by altering the position of the pattern pegs in the drum located in the top front portion of the machine, the pegs being simply withdrawn and then inserted in the desired slots. Selector fingers are actuated by these pegs as the pattern drum rotates.

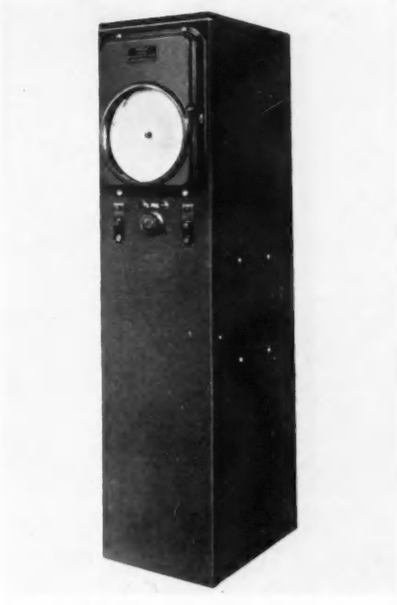
The intervening mechanism between the selector fingers and the needles conveys the motivating action by means of which the needle is controlled to form the stitch pattern. More common specifications of links-and-links machines are 4 in. with 168 needles and 132 needles, and 3½ in. with 200 needles.

Drop-Wire Inserting Machine

For automatically inserting drop wires on worsted, woolen, silk, and rayon looms, Abbott Machine Co., Wilton, N. H., has developed a machine which feeds itself across the warp, passing warp ends under it, and dropping a wire on each.

The drop-wire machine can be used on the hairpin or open type of stop motion, and will place wires on from two to eight banks in a symmetrical manner. The device is equipped with stop motions to check the machine in case either wires or ends do not feed in the correct manner.

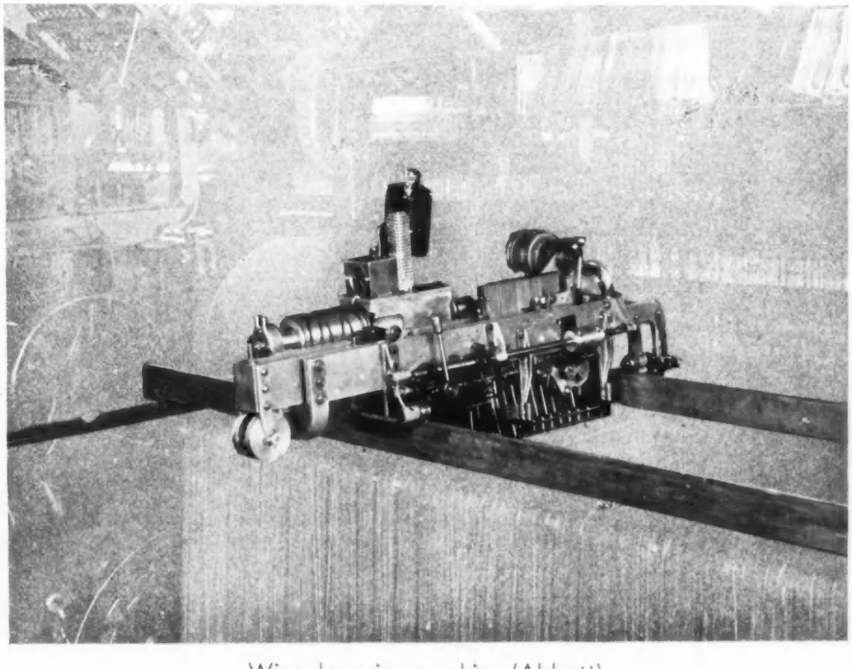
Speed of the machine is said to be two to three times that of a skilled operator dropping wires.



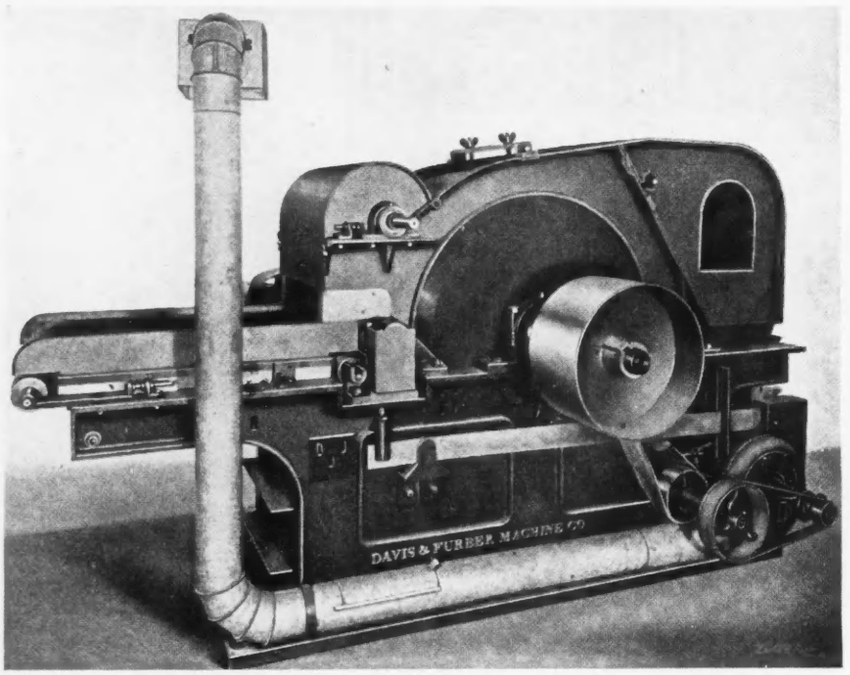
Moisture content controller (Barber-Colman)

Moisture Content Controller

For controlling moisture content in warps and in finished fabrics, Barber-Colman Co., Rockford, Ill., has announced an indicating moisture-content recorder-controller. The instrument indicates and makes a permanent record of moisture content to within a small



Wire dropping machine (Abbott)



Shoddy picker (Davis & Furber)

traction of 1%. By means of a sensitive remote-control system, a sudden deviation in moisture content from the desired value causes the controller to make a rapid initial speed adjustment proportional to deviation from the set point.

The instrument operates on the electrical-resistance principle. As the material passes between a pair of electrodes, any variation in its electrical resistance, which is a function of the moisture content, is indicated and recorded directly in percentage of regain. Through these electrodes the speed or temperature of the dryer is regulated. The electrodes, made of stainless steel, are comparatively light in weight, are unaffected by moisture or corrosive fumes, and do not produce a wave in the warp or cloth. A speed adjuster on the machine is actuated by a suitable geared motor, which is a part of the controller.

Four black-lacquered, chromium-trimmed steel panels and a steel top mounted on a heavy welded steel frame, house the electrical equipment, which is arranged on steel panels and shelves. Indicator and recorder scales afford a range of from 2 to 8% regain. An electrically driven circular chart provides a completely visible 24-hour record. The recording pen is actuated by a motor-driven device.

Loom Light

Said fully to comply with recommendations of the Illuminating Engineering Society for proper illumination of looms, is a new reflector developed by Benjamin Electric Mfg. Co., Des Plaines, Ill. The reflector, it is asserted, effectively equalizes illumination over a definitely restricted area; thus, in the case of looms, it is recommended that the reflectors be located directly over each loom, to eliminate the weaver's shadow on the woven cloth during inspection for flaws.

Reflector for loom lighting (Benjamin)

The same company has recently developed an oblong-shaped reflector, especially for the lighting of stock-room bins, shelves, etc.

Improved Shoddy Picker

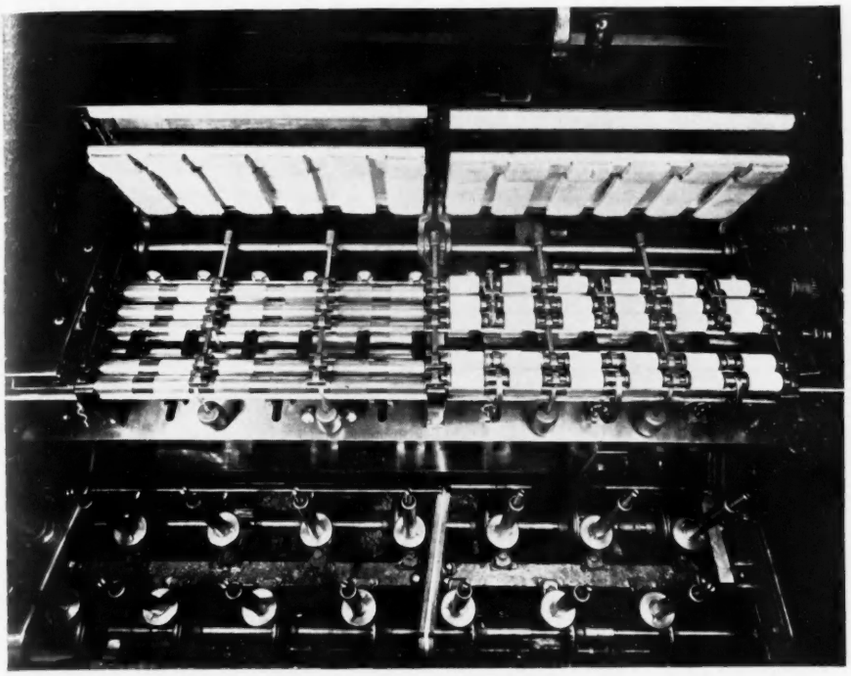
Two important features of an improved rag or shoddy picker just brought out by Davis & Furber Machine Co., North Andover, Mass., are: (1) an automatic bit return for continuously returning unopened bits of fabric to the feed apron, and (2) a quick wind-back device for feed rolls and apron when the feed becomes jammed due to heavy feeding. The improved rag picker is of heavy construction so as to afford trouble-free performance while giving the largest production. The main-cylinder shaft and bit-roll shaft run in ball bearings.

For soft fabrics the cylinder has 5,500 teeth; for medium hard fabrics, 7,500 teeth; and for hard difficult materials, 10,000 or 11,000 teeth. Different weights and styles of teeth can be furnished to suit different work. A three-speed drive for the feed rolls provides the best speed for each quality of stock and allows maximum production with quality of reclaimed fiber.

Selvage Trimmer

Hermas Machine Co., Hawthorne, N. J., has announced a new selvage trimmer with loop clipper. This machine is designed to shear hanging threads from cloth where it is only necessary to shear the selvage. The loop clipping attachment breaks the loops formed on goods woven on box looms, such as handkerchiefs, ginghams, plaids, checks, blanket material, and all other fabrics woven on box looms. This attachment breaks

Selvage trimmer (Hermas)



Long-draft roving system (H & B)

these loops transforming them into hanging threads so that they can be sheared by the trimming unit.

This new selvage loop clipper consists of an endless belt of blade holders that pick up the loops which are then cut by a small removable knife, one of which is inserted in each foot. These blades are easily removable for replacement purposes. The trimming unit consists of a small shearing unit with ledger blade and revolving knife, individually motor driven, including suction fan that draws the hanging threads into the knife to be sheared off. This attachment also includes an automatic electric seam protector. Where the machine is to be used for hanging selvage threads only, it can be had without the loop clipping attachment.

The machine is built of welded steel throughout; all revolving parts are equipped with ball bearings. Both units can be moved back and forth on the rails to accommodate any width cloth up to the maximum width of the machine and still allow the cloth to run through the center of the machine.

Improved Long-Draft Roving Frame

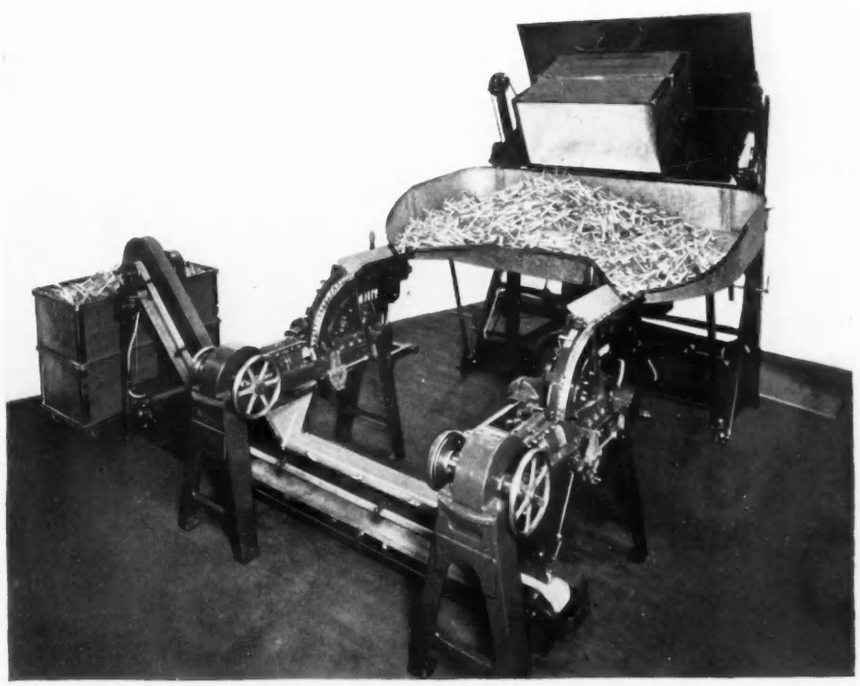
Twelve outstanding improvements have been made recently in long-draft roving frame manufactured by H & B American Machine Co., Pawtucket, R. I. One improvement consists of complete redesigning of the universal head gearing unit, the function of which is to permit intermediate draft adjustments without changing the over-all draft. The unit is inclosed in a streamlined aluminum cover which protects it from lint but which swings back on a hinge to permit ready access for adjustments. All adjusting yokes have retaining bolts which are easily accessible for gear changes. Roll settings are readily made by releasing one nut on an adjustable slide and two nuts on the supporting jack-shaft yoke. Drive to compound back-roll gears is through a roller-bearing chain.

Other improvements are adjustable bevel-gear back lifting-roll drive, to give greater stability and smoother operation; worm-drive adjustable traverse motion which eliminates dwell; rustless-metal clearer covers with cylindrical front roll clearer; new-type horse head and belt shipper which affords more rugged construction and more positive operation; slotted-type underclearer which prevents waste from getting into work and reduces frequency of cleaning; redesigned roll stand which permits easy setting of rolls to accommodate all lengths of staple; articulated chain drive for bobbin-lifting shaft; silent drive for spindle shaft; new scroll-condenser rod, which maintains a fixed relation to adjacent rolls; scroll and rolls are conveniently set as one unit; new cap-bar assembly with all nebs retained by Allen setscrews to provide a smooth surface for cleaning; metal-casing offplates.

Bobbin-Box Hoist

For use with its high-speed bobbin-cleaning machinery, Terrell Machine Co., Charlotte, N. C., has developed a bobbin-box hoist and conveyor-elevator. The purpose of the machine is to eliminate hand lifting of bobbin boxes for filling of bobbin-stripper hoppers, and to dump cleaned bobbins into filling boxes.

It is stated the conveyor-elevator can be extended to take care of two, three, or four machines; and that over-



Bobbin-box hoist and conveyor (Terrell)

all savings through its use often pay for the installation in from 12 to 18 months.

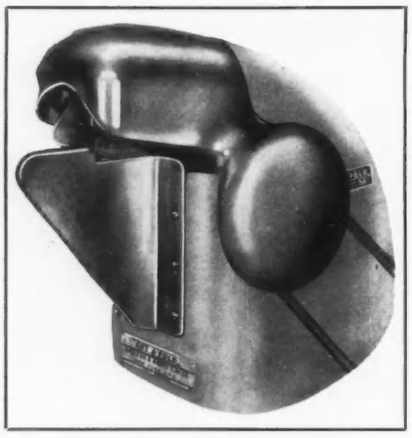
Ribbon Loom

A speed of 950 picks per min. features the Type 15B single-shuttle Saurer ribbon loom being introduced by Saentis, Inc., Union City, N. J. The new loom is available in groups of 6, 12, 18, and 24 heads. It is fitted with two shafts, and is designed for production of rayon ribbons and cotton tapes up to $\frac{5}{16}$ in. wide. The loom can operate with up to a maximum of 52 ends per in., and picks can be varied between 7 and 250 per in.

A twelve-head loom requires floor space 11 ft. 6 in. x 2 ft. 6 in. Requirements for other sizes are in proportion.

Label Cutter

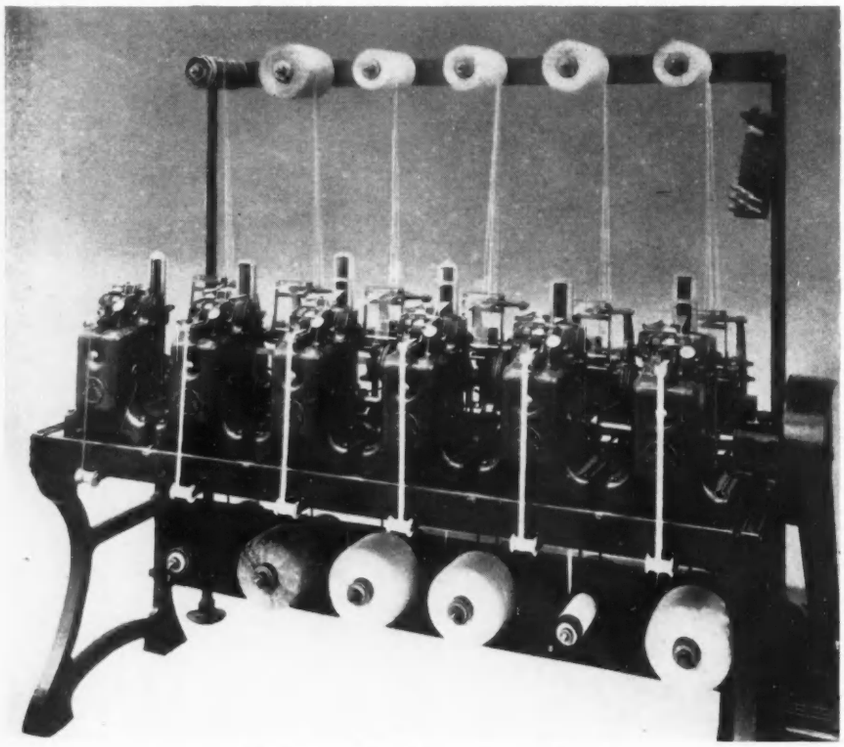
Recently introduced by Willcox & Gibbs Sewing Machine Co., 656 Broadway, New York, is a machine which provides a new method for cutting and folding labels and hangers. The operating principle of the new label cutter and folder consists of a circular knife which revolves in conjunction with, but somewhat faster than, two serrated rollers which represent the folding means. Guides are adjustable to permit variation in the amount of turn-over, thus adapting the machine to a wide variety of requirements. With this machine, one operator can cut and fold 2,500 labels per hour.



Label cutter and folder (Willcox & Gibbs)

Useful Accessories for Textile Mills

Time-Study Machine. C. A. Marston Co., Braintree, Mass., has announced a new method and machine for making detailed time studies. Numbered buttons, on the small time-study machine, are pressed in proper sequence, and record in different colors of ink on a perforated paper tape the exact amount of time taken for each unit operation. It is said that with the device fractions as small as 1/2000 of a minute can easily be read, and that accuracy is increased, because chance of error in reading stopwatch, writing down figures, and making final calculations is eliminated.



Single-shuttle ribbon loom (Saentis)

Water Pumps. Introduction of a new line of shallow well and deep well pumps has been announced by Crane Co., 836 S. Michigan Ave., Chicago. The shallow-well pumps, referred to as Type K, are offered in 250 and 375 gal. per hr. sizes; deep-well pumps, designated D-60, have load-balancing cylinders and silent herringbone gears, and are available with different sizes of load-balancing cylinders, giving flexibility to meet various operating conditions.

Revolving Joints. Barco Mfg. Co., 1801 Winnemac Ave., Chicago, has recently announced a new revolving joint said to provide movement in all directions in connecting fixed piping to revolving drums or other apparatus. The only revolving part of the joint is a rotating sleeve, which also provides a sliding movement in the event there is end play in the revolving member; eccentricity of movement is taken care of by two ball surfaces, which also provide flexibility to take care of any slight misalignment when the joint is applied.

Mixers. A redesigned, side-entering, V-belt mixer has been announced by Mixing Equipment Co., Rochester, N. Y. Changes made have produced a stronger, lighter unit at a lowered price.

Centrifugal Pumps. Allis-Chalmers Mfg. Co., Milwaukee, Wis., has recently announced the inclusion of ball bearings as standard equipment on nearly all its line of single-stage centrifugal pumps, where peripheral speeds are not excessive and where the quality of the pumps would not be jeopardized thereby.

Electrical Equipment. Three new items have recently been announced by Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. These are:

Indoor dry-type current transformers rated at 200 and 400 amperes, 600 volts; and 600 amperes, 600 volts.

Induction motors for 3,600 r.p.m., 600–3,000 hp. service have been redesigned to insure quiet operation with minimum windage noise, and are said to be particularly adaptable to centrifugal pump and compressor drives.

A new fluorescent lighting unit designed for general or supplementary applications; both single- and two-lamp units are available, for either 110–120 or 220–240 volt supply.

Thermal Converter. Recently announced by Bristol Co., Waterbury, Conn., is a new thermal converter, known as the Thermoverter, for a-c. electrical power measurements. With either a direct-deflecting millivoltmeter or a potentiometer as the measuring instrument, this device can be used to measure the a-c. power in an individual circuit, to totalize the a-c. power in a number of circuits or for telemetering a-c. power or totalized load.

New Dyes and Chemicals

Delustrant

Development of a new product for delustering woven or knitted rayon fabrics on the pad has been announced recently by General Dyestuff Corp., 435 Hudson St., New York. This material, Este Delustrant EK, is a white paste-like product which dissolves in warm water. Goods are given one passage through a pad, containing 1½ to 3¼ lb. per gal. of the delustrant, according to the type of fabric and degree of matt desired. Rayon so treated is said to have a soft, desirable handle.

Ammoniated Soap

Two new super-ammoniated fatty-acid soaps for special uses have been announced recently by Glyco Products Co., Inc., 148 Lafayette St., New York. The soaps are water dispersible and, when applied, dry readily to give water-repellent films of good lubricating value. They are said to be excellent emulsifying agents, giving emulsions the films of which do not re-emulsify after drying. In addition, it is stated that they have excellent detergent properties and frothing power. Commercially the products are marketed under the names of S. A. Laurate and S. A. Stearate. The former is a transparent light-colored paste, while the latter is a pearly white.

General Dyes

General Dyestuff Corp. announces the following new products:

Fastusol Blue LFFBL, a direct dye yielding a clear, bright blue of good fastness to light; fastness to water may be improved by treatment with Solidogen B or BSE.

Algol Yellow 4GF Paste, a vat color producing bright shades of yellow with a greenish cast; dyeings have very good fastness to washing and chlorine and fairly good fastness to light.

Chromoxane Brilliant Violet 5R, a homogeneous chrome dye yielding a particularly bright lilac shade of comparatively good fastness to light; very good fastness to laundering; and good fastness to washing, fulling, carbonizing, and decatizing.

Water-Repellent

For rendering fabrics water-repellent, and at the same time making them spot-proof, perspiration-proof, moth-proof, mildew-proof, and shape-retaining, Durotize Sales Corp., 2810 Superior Ave., Cleveland, Ohio, has recently developed a new compound, called Durotize. It is stated also that the new product makes hosiery snag-resistant, thus increasing the wearing qualities of the stockings and rendering them resistant to stains and spots from water, rain, and moisture. According to the manufacturer, Durotize does not change the texture, hand or appearance of the fabric; but tests indicate that in some cases the tensile (or bursting) strength of fabrics is considerably increased, in some instances as high as 30%.

Also, it is stated further by the manufacturer that in the case of commercial dyes Durotize aids in setting the dyes and preventing bleeding of colors, and that it also preserves the freshness of fabrics dyed with vat or other fast colors.

New Publications

Mule Spinning

INSTRUCTION MANUAL—Extra Heavy pattern High-speed Mule and Giant Package Mule; Johnson & Bassett, Inc., Worcester, Mass.; $2.50.

This 112-page book contains comprehensive pertinent information about mules and mule spinning, which should be helpful to anyone interested in that subject. Contents of the manual include history of wool spinning, development of Johnson & Bassett mules, operation of the mule, equipment to handle special yarns, auxiliary equipment, care of the mule and adjustments, erection, bobbins and their manufacture, general information. This last topic includes discussion of foreign shipments, weight of the mule, and formulas. A table of speeds and a comparative yarn table are included at the back of the book.

Fashions for Men

MEN CAN TAKE IT, by Elizabeth Hawes; Random House, New York; $2.00.

Because Elizabeth Hawes made a great hit with "Fashion Is Spinach," her newest book was anticipated with relish by this reviewer. After reading it, however, it is borne in upon us with great force that Miss Hawes said all she had to say about fashion, for women or for men, in her first.

Supposedly reading a book concerning fashions for men, one pushes through many chapters of Scotch-and-soda conversation with the Big Three undergraduates; pointless tirades upon the Average American Woman (whom Miss Hawes attempts to caricature in words); some rather aimless discussion on the Gallup and other polls; considerable wordage on Miss Hawes' personal antipathy toward men's habit of wearing conventional clothes in hot weather; plus lengthy quotations from and much fencing with Mr. Twyeffort and his Merchant Tailors. We don't know Mr. T. but somehow we are now automatically on his side.

This book is not witty. It is not constructive. It is hardly intelligent reading. If there has been some embryonic movement on foot for more comfortable dressing for the male, "Men Can Take It" will probably give it a ten-year set-back.

Our suggestion is that as an author Miss Hawes should stick to her dressmaking.

Dyeing Methods

DYEING WITH COAL-TAR DYESTUFFS, Third Edition, by C. M. Whittaker and C. C. Wilcock; D. Van Nostrand & Co., 250 Fourth Avenue, New York; $5.

This new edition of Whittaker's well-known book on dyeing has been thoroughly revised with the collaboration of Mr. Wilcock. The section on dyeing of rayon has been greatly expanded and directions for testing suitability of dyes for application to various types of rayon have been included. Also, the section on application of zoic and vat dyes has been extended and brought up to date. A new section has been included which is devoted to the use of dyeing assistants and other auxiliary products. Everyone interested in the application of dyes to textiles will find this new edition well worth a place in his library.

A Story of Simple Living

PURSLANE, by Bernice Kelly Harris; University of N. C. Press, Chapel Hill, N. C.; $2.50.

At last it's here: a perfect story of simple living in a southern State. In "Purslane" Miss Harris has produced one of the sweetest, cleanest stories of the South and the South's moderately poor farmer-class it has ever been this reviewer's privilege to read. A story in which one lives for a whole year with the honest, hard-working, God-fearing kin of Pate's Crossing where life moves

slowly, but develops beauty and love and heart-break and tragedy with overwhelming power.

Those who have spent some time in rural communities of the South will feel a great nostalgia upon reading "Purslane." Those who have never been South of Philadelphia will see a side of southern farm life that is real and substantial. But it is a safe bet that in either case when they finish the last chapter they will have the sensation of telling good friends good-bye only for a time, with the actual expectation of seeing them again before too long. The characters of "Purslane" are too strong to remain between the covers of a book.

All this we tell you—for we are not suggesting you read "Purslane." We are assuming you will. You must. It's that kind of a book.

Biographies of Simple Folk

THESE ARE OUR LIVES, Federal Writers Project, W.P.A. of N. C., Tenn., and Ga.; University of N. C. Press, Chapel Hill, N. C.; $2.00.

Rich man, poor man, beggar man . . . these are the people whose hopes and ambitions, whose trials and tribulations make the material for the series of excellent short biographical stories which compose this volume.

It is a new thought in book writing. It is a new way of bringing the lives and circumstances of the people of our land to the reading public. The stories give a good cross-section: those who have failed at tenant farming and hate it . . . those who have done well and don't mind it . . . those who work in mills and get good pay for good work and those who work in mills and shriek for unionism . . . those who find pleasure or discontent in other and general types of work which range from that of doctor to that of housemaid. The tales are typical of the people they portray, and of the section in which those people live.

Each story is interesting. Each tells the reader something. But to our minds it is the sort of book to keep on the bedside table for an occasional nibble. The stories are too much in the same vein to pull the reader from one straight to another.

For Wool Manufacturers

BULLETIN OF NAWM: National Association of Wool Manufacturers, New York and Boston; 642 pages; $2.00.

Volume LXVIII of this series covers activities of NAWM for 1938 and gives a compendium of statistics and other matters relating to the wool textile industry. Of particular interest are the reports on tariff matters, labeling regulations, wage-hour, shrinkage, etc.

News of Suppliers

Rodney Hunt Machine Co., Orange, Mass., announces that C. H. Reumann is now representing the firm in the South. Mr. Reumann was formerly with the Philadelphia Drying Machine Co.

H. O. Werner is taking over the business of **E. O. Spindler,** who died early this year. The affairs of E. O. Spindler are being liquidated, but the various agencies of Saupe, Foerster, and Sander & Grass are being continued by H. O. Werner who will run the business under the name of H. O. Werner successor to E. O. Spindler. Mr. Werner has been connected with the Spindler business for the last 17 years.

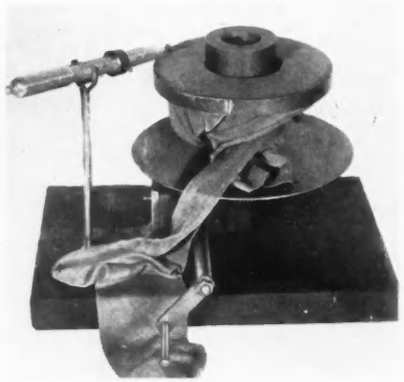
Edwin Farnham Greene-McCord Corp.'s business, after July 1, is being carried on by separate corporations. H. M. McCord will continue under the name of McCord Mill Properties, Inc., with offices at 51 Madison Ave., New York, and at 49 Westminster St., Providence, R. I., to handle liquidations of mill properties and equipment. Mr. Greene will specialize on refinancing and reorganizing textile and other mill properties, with offices at 51 Madison Ave.

Atwood Machine Co., Stonington, Conn., has appointed Theodore Dewhurst as sales manager with offices at the plant. He was formerly manager of sales in Metropolitan New York, the Middle West and Canada. New York will now be covered by John Breen under Mr. Dewhurst's direction. Mr. Breen's office remaining at Wilkes Barre, Pa., as in the past. A. L. Lewis, vice-president of Atwood and formerly sales manager, has been appointed chief engineer.

Barber-Colman Co.'s Electrical Division is now represented at its Greenville, S. C., office by I. M. Riles. Equipment for automatic control of temperature and humidity is manufactured by this division, as well as controls for many industrial applications.

Oakite Products Inc., New York, has recently issued an anniversary brochure marking the 30th milestone of the company's history. This handsomely illustrated booklet is designed to show how the development and operation of the major industries in this country have been influenced by Oakite cleaning services.

Terrell Machine Co., Charlotte, N. C., has appointed E. W. S. Jasper, Inc., Elizabeth, N. J., as agent in the States of Pennsylvania and New Jersey for the complete Terrell line of quill cleaning and handling machinery, as well as the Denman line of fabric loom parts, pickers, lug straps, etc., for which Terrell is exclusive sales agent.



Snag Resistance Tester—Machine devised by United States Testing Co. consists of revolving disk covered with sponge rubber, on which stocking is clamped. An adjustable needle, controlled by a variable weight, rides on the stocking; the weight on the needle is increased until finally a snag develops.

Hazard Advertising Corp., New York, announces that, effective Aug. 1, Leslie S. Gillette becomes executive vice-president. Mr. Gillette joins the Hazard staff after being advertising and sales promotion manager of U. S. Industrial Alcohol Co. since 1930. Effective also Aug. 1, Hazard has been appointed the agency for industrial advertising for U.S.I.A. with Mr. Gillette as agency contact representative.

Atlanta Power Transmission Club elected B. S. Barker, Jr., of Pye-Barker Supply Co., as president at the regular meeting at Biltmore Hotel, Atlanta, Ga., July 28. Ingram Dickinson, treasurer, Southern Belting Co., was made vice-president; Jos. Winship, of Fulton Supply Co., treasurer; Mrs. Maeir Key, secretary.

Edward S. Kempton, formerly of A. B. Carter, Inc., has formed his own company, Kempton Parts & Spring Co., Gastonia, N. C.

A. B., Moss, Jr., until recently an official of Whitney (S. C.) Mfg. Co., has been appointed southern manager for Barnes Textile Associates, Inc., Boston. The firm has opened a southern office at Charlotte, N. C.

Geo. S. Harwood & Son have removed their sales and general offices from Boston to Watertown, Mass., where they are located at 36 Pleasant St.

Scholler Bros., Philadelphia, are erecting a modern, two-story brick and glass-block building which will add 20,000 sq. ft. to their plant on textile soaps, softeners, sulphonated oils and finishes. It is located on Collins Street

north of Westmoreland, and will be ready for occupancy about Oct. 1.

Clifton E. Watson, of Worcester, Mass., has purchased the entire machinery and equipment of the Litchfield Shuttle Co., Southbridge, Mass. A new corporation will be formed, and, as soon as other details are arranged, operations will be resumed. Mr. Watson was vice-president and general manager of the Watson-Williams Mfg. Co. for seventeen years. He recently resigned and accepted the position of general sales manager of the Litchfield Shuttle Co.

Aridye Corp., Fair Lawn, N. J., has opened an office in Greenville, S. C., at 201 Allen Bldg. C. M. Robbins is in charge. Also associated with this office are W. B. DePass and C. H. Patrick. Mr. Patrick was at one time superintendent of Union Bleachery and more recently with E. F. Houghton & Co.

Alrose Chemical Co., Providence, R. I., has appointed Dr. Otto Stein, formerly research chemist for Rohm & Haas and recently with A. Th. Boehme of Germany, as research chemist specializing in synthetic chemicals for the textile trade. Dr. Preston Slachman has been promoted to plant manager and Louis Corman, research director. Albert Darby, formerly with Esmond Mills, is continuing his research in the application to new textile uses of synthetic chemicals.

Quaker Chemical Products Corp., Conshohocken, Pa., announces that Albin Johnson has joined the technical development staff. Mr. Johnson has extensive technical background, is now specializing in the hosiery field. He has for some months been developing, in conjunction with the Gotham Silk Hosiery Co., the use of new type product for direct knitting.

National Oil Products Co., Harrison, N. J., has approved plans for a 5-story brick and concrete building, to house manufacturing equipment for production of industrial chemicals and processing oils to be completed by next winter. Cost will be from $150,000 to $200,000.

C. M. French, Commercial Trust Bldg., Philadelphia, dealer and exporter in used and rebuilt hosiery mill machinery, left on steamer "Uruguay," July 15 for a six-weeks business trip to Argentina, Brazil and Uruguay.

Wayne Mendell has been appointed to supervise the sales activities of the Tolhurst Centrifugal Division and other divisions of American Machine & Metals, Inc., in the Chicago area, with headquarters at 35 East Wacker Drive. Mr. Mendell was formerly president of the Fletcher Machinery Corp., and vice-president and general sales manager of U. S. Hoffman Machinery Corp.

Endless Belt Corp. has moved its general offices and factory to Pisgah Forest, N. C. It will, however, maintain an office in New York at 9 Rockefeller Plaza.

Diehl Mfg. Co., Electrical Division of the Singer Mfg. Co., has opened an office in Room 617, Johnston Building, Charlotte, N. C., in charge of James H. Lewis.

Piedmont Color & Chemical Co., High Point, N. C., has appointed E. W. Smith of Central Falls, N. C., as a representative. He was recently superintendent of two plants of the Central Falls Mfg. Co.

Associated Factory Mutual Fire Insurance Cos. have opened new district offices at 52 Vanderbilt Ave., New York, and 519 Johnston Building, Charlotte, N. C. W. D. Bullard, who has been with the inspection department of the organization since 1920, and who was district manager at Cleveland before becoming New Jersey resident engineer in 1933, heads the New York staff. J. K. Griffin, who joined the inspection department in 1925 and who has had engineering and executive work in Boston, Chicago and St. Louis, has been placed in charge of the Charlotte office. A. H. Barber, who has been resident engineer in North Carolina, for ten years, will handle loss adjustments in the South. The company was organized 104 years ago and now has headquarters, laboratories, research facilities and a field testing station in Boston, in addition to seven branch offices.

W. D. Bullard

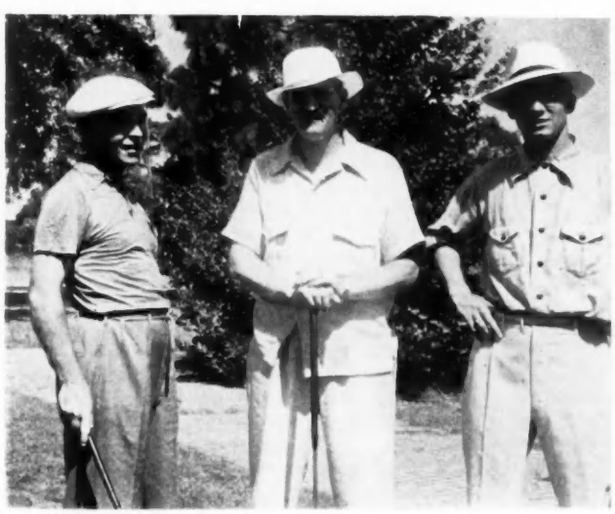
J. K. Griffin

Hercules Powder Co., Wilmington, Del., has added N. Judson Miller to the sales staff of its Providence Drysalters Division to serve the textile industry in North Carolina and South Carolina. Mr. Miller has headquarters at the branch office of the Naval Stores Department of Hercules Powder Co., 615 Johnston Building, Charlotte, N. C. Mr. Miller has been a broker for textile chemicals and supplies in the South.

Air Reduction Sales Co., New York, has appointed J. T. Gillespie, Jr., as assistant to Thomas B. Hasler, president of the Wilson Welder & Metals Co., Inc., an affiliate of AIRCO.

Thomas & Skinner Steel Products Co. has announced that Henry Anner has severed his relations with them. He was formerly their southern representative.

General Electric Vapor Lamp Co., Hoboken, N. J., has been merged with the Incandescent Lamp Department of General Electric Co., and the latter will hereafter be known as the Lamp Department of the General Electric Co.



An Onyx Oil three-some caught at recent Myrtle Beach outing of the Piedmont Section, A.A.T.C.C.—Eddie Klumph (Charlotte), Chas. Ehrengart (Jersey City), Cliff Myers (Charlotte) all of Onyx Oil & Chemical Co.

FREE FOR THE ASKING

Readers interested in literature reviewed on this page may secure copies by writing to Textile World, 330 West 42nd St., New York, giving their company connection, title of item desired, and date of issue in which it was reviewed.

Shim Application. Laminated Shim Co. 8-page bulletin lists alphabetically many uses for laminated shims; included are photographs of 46 of these uses.

Fabric Manuals. Good Housekeeping Magazine. Two sales training manuals for department store executives discuss and picture "Cotton and Cotton Fabrics" and "Silk and Silk Fabrics."

Resins. Rohm & Haas Co., Inc. Leaflet describes use of resin as a textile finishing agent; contains photograph indicating that company's resin products do not lessen true color of dyestuffs or crispness of pattern.

Machine Tools. National Machine Tool Builders' Assn. Illustrated booklet shows use of machine tools, scope of the industry, etc.

Time Equipment. Stromberg Time Corp. Illustrated folder describes company's recorders, stamps, clocks, etc. for various types of time recording.

Building Maintenance. Flexrock Co. 60-page handbook of building maintenance contains description of company's products for repairing floors, roofs, etc.; together with data on their application.

Belts. Mechanical Goods Division, United States Rubber Co. 36-page booklet titled "Belting Biographies" describes company's complete line of transmission and conveyor belts; included are installation photographs and specification and other data.

Warp Sizing. Chas. B. Johnson. June issue of "Rayon Warp Sizing Specialist" contains items on trying out new constructions before offering them, stretch of 75-den. acetate, sizer control, etc.

Mill Supplies. Sees & Faber Co., Inc. Illustrated, spiral-bound, 164-page catalog lists, describes, and gives other data on large variety of mill-supply items.

Cutting and Doffing. Automatic Air Doffer Co. Illustrated 8-page booklet describes company's new machine for cutting and doffing various textile items.

Knitting Equipment. Thomas & Skinner Steel Products Co. Leaflet pictures and describes company's course marker, narrowing chain, etc., and describes reconditioning service for wide variety of knitting-machine parts.

Floor Coloring. Master Builders Co. Leaflet describes company's method of coloring concrete floors which are already laid: application, color, and other data are included.

Alloys. Colonial Alloys Co. Bulletin No. 2639 illustrates and briefly describes buckets, tanks, vats, kettles and many other forms of this stainless, rust-proof, light-weight metal now available for distribution.

Bakelite-Laminated. Synthane Corp. Folder describes practical methods of machining Bakelite-laminated, and tells how to apply them in the individual shop; included is a condensed chart suitable for wall hanging.

Starch Pastes. Stein, Hall & Co., Inc. 8-page reprint of technical article discusses consistency changes in starch pastes.

Bearing Bronze. Johnson Bronze Co. Catalog L-1 lists over 300 individual sizes of Ledaloyl self-lubricating bearing bronze carried in stock by this company; included also are descriptions of the product, and installation diagrams.

Motors and Resistors. Westinghouse Electric & Mfg. Co. Bulletin F-8484 describes totally inclosed loom motors of one-half to two horsepower for 220-, 440-, or 550-volt power supply; leaflet 1734-B contains instructions for manufacture and care of grid type resistors for d-c. and a-c. motors.

Finishing Machinery. James Hunter Machine Co. June issue of "The Hunter Counselor" contains articles on labor-saving machinery, tentering woolens, and factors underlying profitable operation.

Water Conditioning. Permutit Company. Bulletin 2225 describes company's pressure filters, and Leaflet 2218 describes automatic de-sludging valve for hot lime soda softeners.

Shearing Equipment. Hermas Machine Co. June issue of "Clothroom Spotlight" contains comparison sheet showing analysis of cost of using old and new shearing equipment, photograph of company's selvage cleaner and loop cutter, and other interesting material.

Chemicals. Niacet Chemicals Corp. 36-page booklet describes chemicals produced by this company and the uses to which they can be put.

Lamp-Lowering Hangers. Thompson Electric Co. Catalog describes and illustrates company's equipment for lowering lamp hangers for cleaning and servicing.

V-Belts. Manhattan Rubber Mfg. Division of Raybestos-Manhattan Inc. V-Belt data book, divided into two parts, contains information regarding standard drives, eliminating the necessity of working out calculations, and sheave factors for designing new or special drives.

Dyes. E. I. du Pont de Nemours & Co., Inc. Illustrated booklet contains brief answers to questions such as "Where are dyes used" "What are dyestuffs?" "Why are non-fast colors made?" etc.

Nickel Alloys. International Nickel Co., Inc. 6-page technical bulletin contains basic information on mechanical, corrosion-resisting and other properties of rolled nickel, Monel, and other high nickel alloys produced by the company.

Throwing Equipment. Atwood Machine Co. July issue of "Atwood Twists" contains photographs and descriptions of up-to-date throwing machinery and discusses obsolescence of equipment of this type.

Electrical Equipment. General Electric Co. Bulletin GEA-137D describes company's low-speed, synchronous motors; Bulletin GEA-1960A describes low-speed, synchronous generators.

Fading Tests. Hatch Textile Research, Inc. Handy file card gives list of Fadeometer and sunlight equivalents for dyed textile fabrics, and company's prices for various Fadeometer tests.

Lubrication. Standard Oil Co. July issue of "Esso Oilways" contains articles on oils developed especially for ease of stain removal, and on manufacture of bobbins.

Electrical Maintenance Equipment. Ideal Commutator Dresser Co. Catalog No. J-239 gives complete details on company's line of motor and other maintenance equipment, and electrical specialties; included are data on operation of various types of electrical equipment.

Maintenance Products. Continental Asbestos & Refining Corp. 32-page bulletin lists company's products for coating floors, metals, smoke stacks, etc. to protect them from wear, heat, corrosion, and deterioration from other causes.

Materials-Handling Equipment. Harnischfeger Corp. Bulletin H-13, in 28 pages, describes and illustrates company's overhead system of materials handling.

Flexible Couplings. Morse Chain Co. Bulletin No. 57 contains engineering data, installation and operating information, and recommended applications for company's entire flexible couplings line.

Steel. Joseph T. Ryerson & Son, Inc. Stock list and data book includes listing of many new products and sizes recently added to company's line; gives weight, length, cutting data, and other pertinent information. Contains handy tab index.

Engine Lubrication. Sinclair Refining Co., Inc. Volume 6 of "Service Factor" contains illustrations, article, and charts describing simplified steam-cylinder lubrication.

Variable-Speed Transmission. Columbia Vari-Speed Co. Bulletin pictures typical applications of company's variable-speed transmission equipment, including textile machines; also contains selection and operation data.

Centrifuges. Sharples Corp. Bulletin 1225 briefly catalogs leading types of Super-Centrifuges manufactured by this company and outlines the general uses to which they are adapted.

Pipe Supports. American District Steam Co. Revised bulletin, No. 35-70B, contains information on pipe supports, saddle plates, pipe alignment guides, and pipe anchors for steam or hot water lines.

Air Compressors. Ingersoll-Rand Co. Description sheet 2437 contains information regarding company's Type 20 vertical, stationary, two-stage, high-pressure air compressors for starting internal combustion engines.

At the World's Fair

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Among features of many exhibits is included equipment of interest to textile men

United States Steel Corp. (United States Steel Bldg.) In a hemispherical building, turned inside out with its structural members on the exterior of a stainless steel dome are exhibited the corrosion-resisting properties and industrial applications of stainless steel

Baker & Co. (Metals Bldg.) Exhibit, which is included in display of Engelhard Industries (name of group), features uses of platinum and other noble metals for rayon spinnerets and other applications

IN OUR JUNE ISSUE we previewed the strictly textile exhibits at the New York World's Fair. But scattered throughout the World of Tomorrow are many other exhibits featuring equipment of direct interest to the textile manufacturer. And so, with the aid of guide book and map, your editors have tried to ferret out those displays. On this and following pages are illustrated some of the things we found. We cannot hope to have covered every exhibit which contains equipment used in the textile industry, and we shall be glad to have our attention called to any omissions so that we can complete the record in subsequent issues. No attempt has been made to list each and every device displayed by the companies included in this pictorial report. Rather our intent has been to let you know what type of equipment is there and in what buildings it can be found.

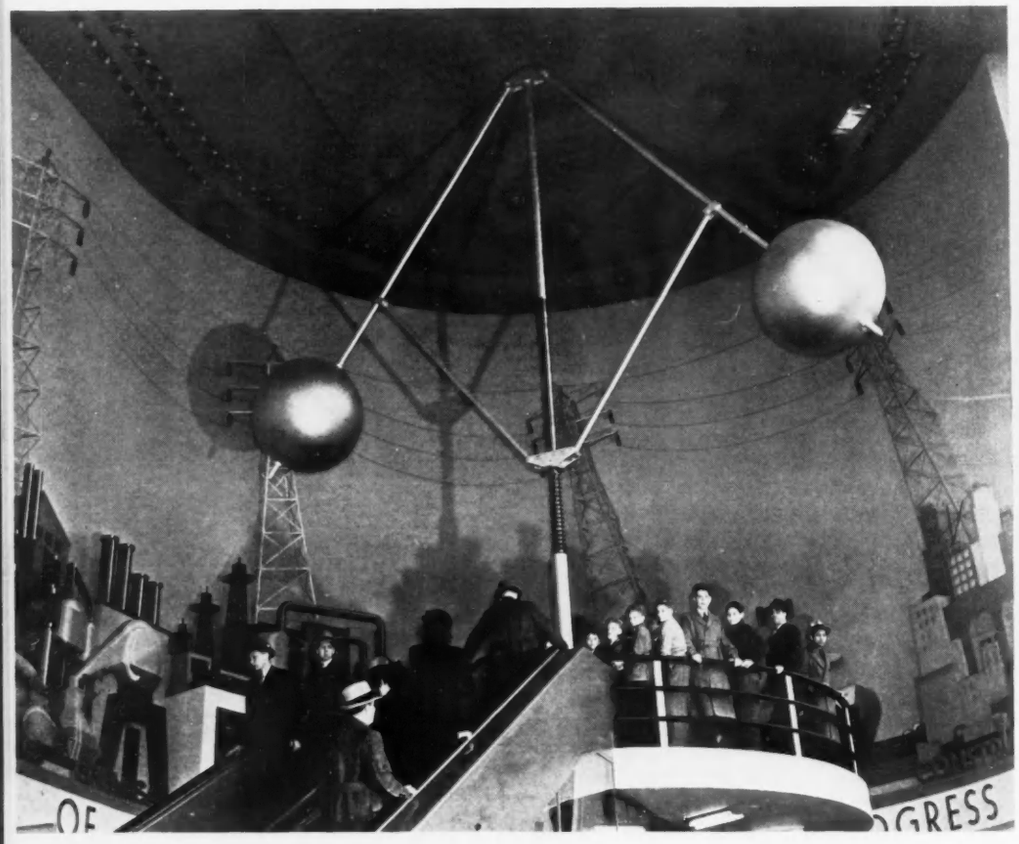
Bethlehem Steel Co. (Metals Bldg.) Exhibit shows how steel is made and illustrates various applications of stainless steel and other of company's products

Copper & Brass Industry (Metals Bldg.) Display sponsored by mining and smelting companies, wire and cable companies, and fabricators illustrates the mining of copper and fabrication and uses of copper and copper-alloy products

(Over)

General Electric Co. (General Electric Bldg.) Diorama shows some of uses of electrical equipment in textile industry; be sure also to visit the House of Magic and Steinmetz Hall

American Chain & Cable Co. (Metals Bldg.) Shows principal products of various divisions of company, including Wright hoists, Reading-Pratt & Cady valves, Page fence, and Tru-Level oil controllers

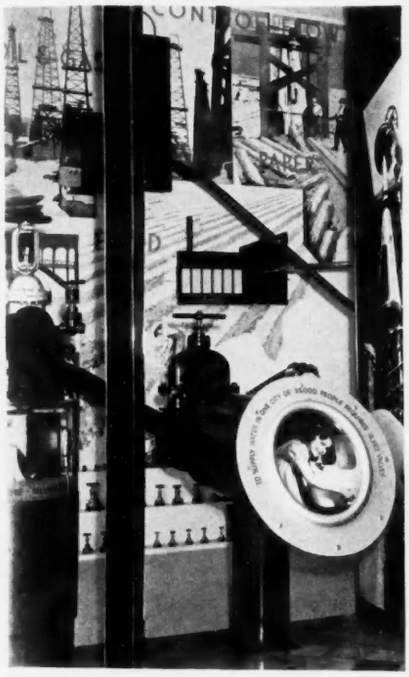


Westinghouse Electric & Mfg. Co. (Westinghouse Bldg.) Exhibit features way in which man has utilized forces of electricity; see also the Robot—an 8-ft. metal man and the Time Capsule; visit the Theater of Tomorrow

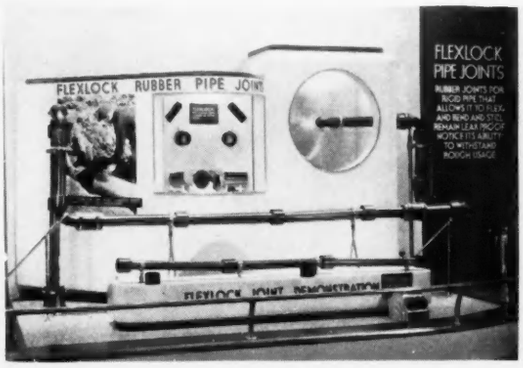
Johns-Manville Sales Corp. (Johns-Manville Bldg.) In the main foyer a gigantic figure clad in an asbestos suit symbolizes man's ability to control heat and protect himself against fire; exhibits of insulating materials, Transite, asbestos shingles, etc.

Carrier Corp. (Carrier Bldg.) In igloo-shaped building are displayed air conditioning and refrigerating equipment, unit heaters, etc., employed in textile and other industries

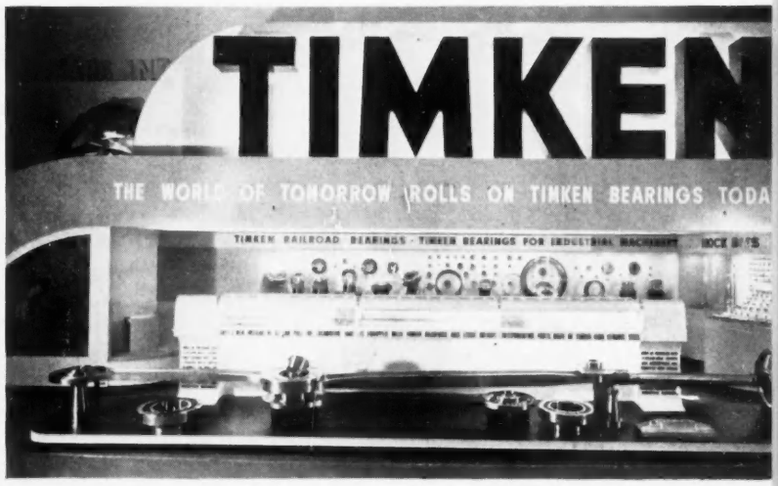
Yale & Towne Mfg. Co. (Metals Bldg.) Exhibit features various types of hoists and other materials handling equipment



Crane Co. (Home Building Center). Exhibit features valves and fittings for industrial and household uses; a transparent glass house shows arrangement of plumbing



B. F. Goodrich Co. (Goodrich Bldg.) Tires for mill trucks. Hi-Flex belting. Flexlock joints for connecting piping. Vibro-Insulator for eliminating vibration in machinery and other rubber products for textile industry At right—Link Belt Co. (Metals Bldg.) Theme is a sculptured figure representing the Spirit of Power Transmission; display illustrates application of silent chain drive to power transmission and materials handling



Timken Roller Bearing Co. (Metals Bldg.) Museum display includes largest anti-friction bearing ever made; also shown are bearings for industrial machinery

At left—New Departure Division General Motors Corp. (General Motors Bldg.) Advantages of the ball type of bearing are featured in this exhibit; see also the General Motors Futurama

Marchant Calculating Machine Co. (Business Systems and Insurance Bldg.) Demonstrations of latest models of high-speed calculating machines illustrate their applications to textile and other businesses

Remington Rand, Inc. (Electrical Products Bldg.) Exhibit features typewriters, tabulating, and accounting machines, and visible and loose leaf equipment; here also is a chance to shave yourself with an electric razor

International Business Machines Corp. (Business Systems and Insurance Bldg.) Exhibit features newest developments in automatic time recorders, payroll machines, accounting machines, and other business machines

Underwood Elliott Fisher Co. (Business Systems and Insurance Bldg.) In this exhibit there is not only a variety of bookkeeping, accounting, and other business machines, but also the world's largest typewriter

At right—National Cash Register Co. (National Cash Register Bldg.) Surmounting this building is the world's largest cash register, recording the Fair's attendance; inside are various types of cash registers and accounting-bookkeeping machines

)VERTISING PAGES REMOVED

THE OVERSEERS' CORNER

HELPING DISPLACED LABOR

A Pete & Bill Discussion

"Get on out now, I'm busy," said Bill threateningly, as Pete stuck his head in the door and grinned.

"All right, all right," Pete came back at him, "but you're going to be busier still if you don't find a place for those two fellows you're laying off this Saturday."

"That's not my lookout," said Bill, looking viciously for his cuspidor. "I've got the machines tuned up for running and I've kept the best man out of the three—the others can hustle for themselves. What I'm interested in is getting my boys in line to turn out the work cheap, and you just watch my costs come down!"

"Yeah," returned Pete, "and watch your labor troubles *go up!*"

Pete eased in and closed the door behind him. "You know Bill," he went on confidentially, "I had the same thing to work out in my department, and before any of the fellows knew it was coming, I looked around and found places for every fellow I was going to fire, either in some other department in the mill or outside. Then the one I kept made a little better wages than he had been getting. Why don't you try something like that?"

"What's the use?" asked Bill, "nobody's putting on new men, let the Government take care of 'em, what do we pay taxes for? No use trying to daddy the whole country, Pete. I'll run my job, let these boys look out for themselves—and now get to heck out o' here so I can finish up!"

Is there any responsibility on an overseer to get other jobs for operatives he may have to let go?

Letters From Readers

For Cooperative Overseers

"Informal Classes for Workers," Pete & Bill, July, 1939

Editor, Overseers' Corner

In reply to your "Pete & Bill Discussion," I wish to give my views on the subject "Do you think an overseer should mix into the education of his subordinates?"

Yes, it would help an awful lot if an overseer would do such a thing. But look around and try to count them. I'll bet you can count them on one hand.

In Mignon we have a vocational school for employees. We also have some of the best and nicest overseers in the business. They teach the various subjects in the classes. Their teaching these classes helps out a three-fold purpose. First, they are more qualified than anyone else; second, it helps them to get their employees; third, the employees find that the overseer is trying to help them and they in turn will help him by making better products, by reducing seconds, and by lowering operating costs.

You take an overseer that is cross and contrary with his employees—how can he expect them to cooperate with him? When he won't speak to them without cursing them out, the employees will shun him. They will not come out with their problems as they should.

All overseers who are like Bill would do well to take stock of themselves and change their mode if they are to get the best that their employees have to offer. Give us more overseers like Pete!

H. J. CABANISS, *Sylacauga, Ala.*

Against Hiring Relatives

"Kinfolks and Angels," Pete & Bill, June, 1939

Editor, Overseers' Corner

Under no circumstances should an overseer employ one of his relatives. Much criticism has been directed at nepotism in industrial plants, and it must be admitted it has not been without justification.

An overseer may be fair and equitable in all his dealings, and he may bend over backwards to be certain that he does not give preferred treatment to a relative. Nevertheless, his actions and motives may be entirely misunderstood by other employees.

It is a far safer policy not to have relatives or personal friends working under your direction. A wiser way is to recommend relatives to the plant manager or superintendent and permit that individual to decide whether or not your relative should work for your company, and in what department the relative should work. Under no circumstances permit your relatives to work under your direction.

W. G. (Philadelphia)

Should Overseers Employ Relatives?

"Kinfolks and Angels," Pete & Bill, June, 1939

Editor, Overseers' Corner

The employment of relatives by overseers always has been a much-discussed phase of management, but it is especially acute in these days of job-scarcity. Traditionally, it is a man's duty to take an interest in the welfare of his kin and give what aid he can when necessary.

Probably no one would object to the appointment of a relative who shows merit and capacity above that of other competitors for the position. Controversy ensues when the appointment is awarded more on grounds of common blood than of able brain.

A nepotistic appointment benefits only the appointee, if anyone. Management, employees and ultimately the company itself suffer from such a policy. When word spreads that positions are filled by

CONTRIBUTIONS to the letters and practical helps in "The Overseers' Corner" are paid for when published without regard to length. We use letters (not over 200 words) discussing the material on this page or any other pertinent matter whether of mechanical, managerial or just plain human interest. Those who contribute practical helps or kinks which are published (not over 500 words) will be paid additional for an appropriate sketch to illustrate their device. It is not necessary to submit finished drawings. Contributions of greater than specified length may be given consideration as articles. If these pages interest you—contribute something to them to interest others. Address Editor, Overseers' Corner, Textile World, 330 West 42d St., New York.

Low Accident Rate at Knitting Mills

Knitting mills and silk and rayon mills made the best showing in the textile industry in the 1938 accident rates, says the annual analysis by the National Safety Council.

Knitting mills had the lowest accident frequency rate, averaging 3.83, and also chalked up the largest reduction in both the frequency rate and the severity rate, compared with 1937. The silk and rayon mills had the lowest severity rate, averaging 0.21.

For the textile industry, as a whole, 1938 injury rates were 6.73 for frequency and 0.59 for severity, which are much below the corresponding average of 12.18 and 1.53 for all industries.

The frequency rate is the number of reportable injuries per one million man-hours of exposure, and the severity rate is the number of days lost per one thousand man-hours exposure, including arbitrary charges for permanent disabilities and deaths.

such methods, expert and ambitious men will hesitate to join the organization. Diligence and zeal among the rank and file are discouraged when what J. W. H. (in the June, 1939 issue of TEXTILE WORLD) calls "son-in-law executives" are in high places. If favoritism is extended to friends as well as relatives of the overseer the whole staff tends to become demoralized.

The appointment of a relative is justified if it is made fairly and in good faith.

W. J. E. (Maryland)

Drunkenness in the Mill

"The Intoxicated Worker," Pete & Bill, May, 1939

Editor, Overseer's Corner:

When a drunk over the week end causes a hangover of this nature, the man's health is usually more to blame than the drink. A visit to a doctor would probably put things right as probably the man's health is down and drink only causes visible effects. Attacks of this nature are often the foregoer of serious breakdowns which if taken in time can be averted without serious consequences. Having a doctor attached to the mill staff who is consulted in such cases will be more effective than the foreman.

W. E. WARNER (London, England)

Fire the Drunks!

"The Intoxicated Worker," Pete & Bill, May, 1939

Editor, Overseer's Corner

Pete and Bill's discussion regarding the handling of an intoxicated worker is no doubt intended to be provocative. A real problem would be presented if a case should arise such as Pete had to contend with.

However, in my experience I never met a Jim Jones. All the drunks I ever ran into came equipped with a whole string of vices and were invariably no good. They just don't bring their pay home.

Personally, I enjoy a drink—in fact several—but when a man repeatedly gets so drunk he can't report sober for work the next day he falls into one of two classes.

1. He is beyond repair.
2. He needs a lesson.

In either case the only remedy is to fire him.

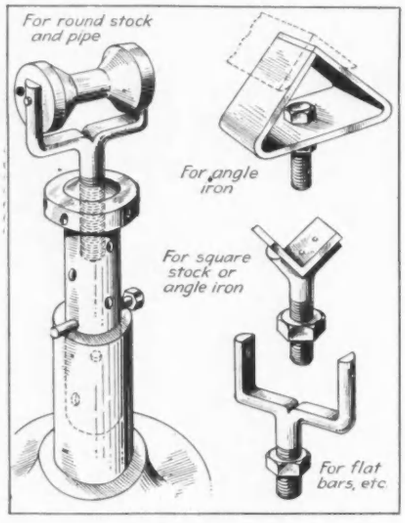
Such men are encountered only infrequently and usually can be replaced with a little effort. A good man who isn't there when you want him is no better than any other man, and I wouldn't want such a man around today's high speed machinery, for his sake, the compensation insurance rate's sake and the sake of my own conscience.

S. H. ALBURGA (Worcester, Mass.)

Overseers' Practical Helps

Work Support

The accompanying diagram shows a work support and several types of heads which we built for our use. It is a simple task to make this kind of support from two different sizes of tubing or pipe; and the various work heads are merely short threaded parts, some of them made from bolts split *Y* or *U* shape and attached by means of a threaded collar. The smaller section of tubing is drilled at several places for



insertion of a pin, which can be placed where desired for control of the height of the stand.

With the attachments illustrated, this stand can be used for round stock and pipe, for angle iron, for square stock, for flat bars, etc.

C. H. Willey (*New Hampshire*)

Acetate Dyes Stain Cotton

Acetate rayon dyes of the usual dispersed type have scarcely any affinity for cotton, but the small dye particles are likely to become attached to cotton material so that they appear to be stained. In dyeing cotton-acetate mixture fabrics in solid shades this staining does not much matter. But, when only the acetate is required to be dyed and the cotton left white, staining of the latter fiber becomes a serious matter.

As a general rule, it is possible to clear the cotton by a soaping or light treatment with sodium hydrosulphite. But, particularly in the case of red and blue shades, neither of these treatments is entirely satisfactory and the cotton remains stained or slightly tinted. As a result of experience, it has been found that in such cases the dyed material should be dried and then soaped. The drying has the effect of changing the acetate dye particles to such an extent that they can be much more easily, and usually completely, removed by warm soap treatment. This kink has been found very useful in dealing with cotton goods in which acetate striping ends have been dyed.

F. W. B. (*England*)

Selling Waste Material

The amount of waste material burned and destroyed each year represents a considerable sum, a large portion of which could be saved if proper precautions were taken. The large plywood cases in which rayon is shipped to the mill are good illustrations. I have seen these emptied and dumped out on the bonfire, or allowed to become unfit for further use by exposure to moisture which warped and/or split the plywood. On the other hand, these boxes can be, and are, sold by some few mills. The plywood makes excellent material for home craftsmen; once these craftsmen find a steady source of good material

The above young people are all sons and daughters of spinners, weavers and other mill employees of the Riverside & Dan River Cotton Mills, Inc., Danville and Schoolfield, Va. Sixty of these youthful southerners arrived in New York, July 4 to see the World's Fair and participate in the celebration of Virginia Day on July 6. Representing the Glee Club of Schoolfield High School, in which all are students, the group was heard in a program of songs twice at the Equitable Gardens and once at the Temple of Religion at the Fair, and over a national hookup of the Columbia Broadcasting System. The majority of these young people plan to enter Riverside & Dan River Cotton Mills as employees, upon graduation from school.

they will be eager to purchase the boxes at prices ranging from 20 to 30 cents each. One large factory in my locality disposes of all its boxes in this manner.

Petty cash can also be realized by selling the white cotton bags and straw mats taken from silk bales. One of the nearby throwsters bales these mats and sells them to small manufacturers who make use of them as shipping containers for their type of product. However, the mats can also be sold for about 10 cents each to persons who create articles from the smooth woven straws. The same thing applies to the cotton coverings, which can be sold to persons desiring the material for one purpose or another; many employees keep their requests on file for bags as they become available.

Selling waste materials benefits the purchaser as well as the mill. The purchaser is able to secure worth-while material at a fraction of cost, and the mill is able to dispose of it at a price, instead of throwing it away.

—H.E.W.
(Pennsylvania)

Making Fancy Warps

Further comments on recent article

Recently we received a letter from the designer and overseer of warp preparation in a large Southern mill, in which he comments on the article, "Making Fancy Warps," which appeared in the May 1939 Issue of TEXTILE WORLD. We are publishing this letter, along with the author's reply. Our readers are invited to write us of their criticisms, either pro or con, regarding this or any other article that we publish.—*Editor.*

Technical Editor:

In the article, "Making Fancy Warps," by J. S. Wulfman, in your May issue, there are a number of errors. Because of these, the article, in my opinion is neither reliable nor practical. The most serious flaw is Mr. Wulfman's method of making a pattern beam of red and blue. I do not agree with him on this method of making a combination beam; i.e., placing colors on the beam without regard to the way they occur in the pattern. In this case, I find the only way to slash this warp would be to separate the red and the blue at the front of the slasher and put in a lease rod. Then the slasher tender could slide the colors across one another to the proper place in counting in. This is an awkward and impractical method. If a slasher tender had to count in two or more beams made by this method, he would find it almost impossible to do. If he should succeed in counting it in, I feel sure he would not be able to run it, for it would be so crossed up that it would tear out in the comb.

This is how the pattern beam should be laid out:

4 ends of red	
2 ends of blue	
8 ends of red	
2 ends of blue	14 repeats
4 ends of red	
8 ends of blue	
4 ends of red	
2 ends of blue	
8 ends of red	
2 ends of blue	
4 ends of red	
412 total ends	

This is the way these ends occur in the pattern and this is the way they should be placed on the section beam.

The way to find the starting point on a warp is not by trial and error, as Mr. Wulfman suggests. There is a simple formula for finding it: find the center of any symmetrical part of the pattern and count back to the right ½ the total ends left over. I would center the pattern so that there would be white on the selvages, instead of black. I think any weave-room overseer would prefer white rather than black on the selvage. It would also make a small saving on the amount of colored yarn going into the pattern.

H. A. WALKER

• • •

MR. WULFMAN has replied to Mr. Walker as follows:

I do not agree with Mr. Walker in that my method of making a pattern beam for the warper set in question, is neither practical nor reliable. I believe that he has lost sight of the fact that what may seem impractical to him for the conditions under which he is working, may prove satisfactory to another person working under other conditions. It seems to be a fault of some mill men and organizations to stick too closely to methods of doing things that have been satisfactory in the past, without being willing to admit or without realizing that there are other methods just as good and sometimes better than the methods that have been handed down from year to year in their own particu-

lar mill or their own organization.

Perhaps the method represented as being the only practical one for making a pattern beam might be preferable for a plant making very long sets. But, if sets are short and the creel has to be changed often, this intricate way of creeling will require an excessive amount of time, as well as make the creelers more liable to mistakes. After all, creelers are paid only about one-half as much as slasher tenders; hence, they are not expected to be so accurate or responsible as slasher tenders.

A good slasher tender could lay in the set described in my article, with no difficulty. Of course, there would be some crossing of ends, but not enough to cause any trouble. Certainly leases would have to be used. This fact is mentioned in the other part of my article, which discusses the procedure for slashing the set, and which has not been published yet. I am of the opinion that regardless of the type of pattern beam used with the other two beams of the set—the solid black and the solid white—it will be necessary to lease the colors, so that they can be counted in.

With reference to Mr. Walker's simple formula for balancing the pattern in order to make the cloth symmetrical with reference to the selvages, it is a rule that is taught in most textile schools, and surely, anyone familiar with fabric analysis and design knows how to apply it. I used this rule in my article without stating it specifically. The use of trial and error has to do with selecting the most desirable starting point for producing an attractively balanced fabric. Admittedly, most weave-room overseers would prefer whenever possible, that a portion of white ends be next to the selvage, not so much for saving in colored yarn cost as for appearance; but, this is a matter of opinion.

This whole question of what is the best procedure for making fancy warps is a matter of conditions, policies, and circumstances. J. S. WULFMAN

Faults in Printing

Can often be overcome by slight changes from regular procedure

By FRANCIS A. NEWTON

A DEFECT frequently encountered in textile printing is caused by the action of hard particles of grit, etc., on the surface of the copper rolls. The cuts which are made in the roller leave an impression on the unprinted parts of the material in the form of streaks and scum. The usual method for removing these damages in the roller is to rub the affected part of the roller with a hard stone until the surface is rubbed level at that particular point. If the cut is a fairly deep one, the trouble may be accentuated instead of cured, due to the fact that the printer, in endeavoring to remove the damage, also rubs away the ridges of the engraving. Again, even if the cut be on a part of the roller which is not actually engraved, there is a real danger of giving rise to a stone-mark in the roller. Such a mark has exactly the same effect as a scum, in that the doctor blade fails to clean away the film of print paste which is left in the depression made by rubbing with the stone.

A better method than rubbing directly with a stone is first to use fine emery paper over a fairly wide area in comparison with the actual damage. This has the effect of giving a rough finish, without leaving any local depression; the final touch can then be added by means of the stone so that no actual roughness is left at any part.

WHITE SPECKS. Occasionally when blotch patterns are printed on fairly light fabrics, white specks will make their appearance in the printed parts. These may be caused in one of the following ways: (1) print paste too thin; (2) oil in the print paste, on the roller, or in the furnisher; (3) slack or insufficiently screwed-up brush furnisher; (4) air bubbles in the print paste due to frothing; and (5) improperly prepared thickenings.

In the first case the remedy obviously is to thicken the color. The question of how this is to be carried out depends on the original formula of the printing paste. Although the addition of dry gum to the color is sometimes tried for this purpose, in the case of blotch prints a simpler method is to make an addition of gum tragacanth. This should be done as follows: The required quantity of tragacanth is placed in a tub and a small amount of the thin print color gradually mixed with constant stirring. Other small additions are then made in the same manner. If the addition of tragacanth is made in such a way as to cause the tragacanth to break up in the mixing, the trouble will probably be worse than at the start. However, if the addition is made correctly, it will usually cure the trouble.

TO PREVENT FROTHING of the paste due to injudicious use of oil, one of the various anti-foaming agents now on the market can be employed. If oil gets on a roller and into the engraving, a good deal of trouble may be encountered. The oil can be removed from the part affected by means of denatured alcohol, benzol, or other solvent, depending on the type of oil. At times mineral oil may get on the rollers as the result of oiling or lubricating the edge of a lint doctor in order to make it work more smoothly; for this reason, use of a specially prepared printing lubricant and froth preventive is much more satisfactory than ordinary oil. Oil may find its way into a brush furnisher as the result of careless oiling of a bearing; the same remedies as described above are applicable, according to circumstances.

It is sometimes found that one end of a roller is printing quite well, while the other end is showing speckiness. An examination will usually disclose the fact that the furnisher has not been evenly screwed-up into contact with the roller. The result is that one end of the roller is not being so well supplied with printing paste and the engraving is not carrying its full complement of color to meet the cloth. The remedy is obvious. Air bubbles due to frothing are also responsible for speckiness; the cure for frothing has already been indicated.

Poorly prepared thickenings are more likely to be met with during rush periods when the demand for color taxes the resources of the color shop. At such times some of the thickenings may not receive sufficient boiling, and small particles of certain types of gum will fail to be wholly assimilated. Such particles frequently give rise to white specks in solid portions of the prints. In some instances it is possible to substitute one of the cold-swelling starches for the gum. With careful mixing and straining, the starch will permit the paste to be prepared speedily and without risk of specks.

When white specks occur with vat printing colors, they may often be eliminated simply by heating the paste to 110 to 120° F. A cure may be effected by a change in the type of furnisher being used. If an ordinary covered wooden furnisher is being used and specks occur, it is quite probable that a change to the brush type will remedy matters.

Bulging Rolls

Hints on improving the take-up on loop-wheel spring-needle outerwear machines

BY J. FREDERICK CAHILL

KNITTERS OF astrakhans and other heavy pile fabrics have frequently had trouble with rolls of fabric bulging at the ends during take-up. Such bulging occurs while the diameter of the roll is comparatively small, and is most prevalent with fabrics containing backing yarn of mohair, low-blood worsted, or other hairy fiber. Due to the fact that on loop-wheel spring-needle machines, the power required to wind the roll is applied to the outside of the roll, there is a slippage of the outside layer of fabric against the preceding layer (Fig. 1). The roll does not turn during occurrence of this slippage, which is more pronounced at the beginning of the roll and diminishes as the weight and diameter of the roll increase. However, because of this slippage, the roll has a soft, spongy center.

One method of reducing slippage at the beginning of a roll is to increase the pressure of the cloth roll against the take-up roll. This can be done by substituting a heavier steel shaft for the wooden cloth roll and using a paper tube on the shaft. The diameter of the shaft should be about 1½ in. While this diameter is rather small, it will be more than compensated for by the heavier weight of the shaft. When the roll of fabric is removed from the machine, the paper tube slips off the shaft and remains within the roll.

But even with the heavy steel shaft, the first one-third of the roll of fabric will be soft enough to bulge out at the ends. The writer has seen rolls that, when neglected, completely filled the take-up frame from one side to the other. It is the practice of some knitters to press back the bulging ends, when the roll is about one-third full, and tie a strip of fabric endways around the roll. Even with this temporary remedy, the bulging will sometimes continue for a few laps over the tie until the roll has gained sufficient weight to take up evenly.

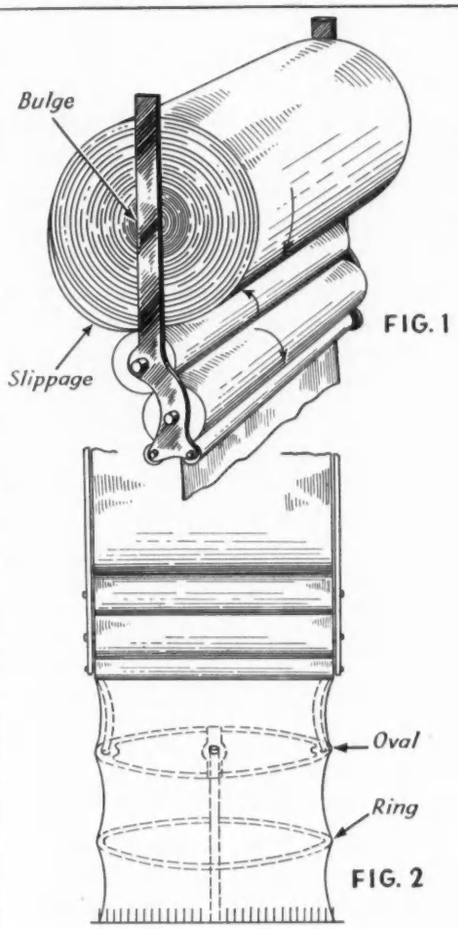


FIG. 1

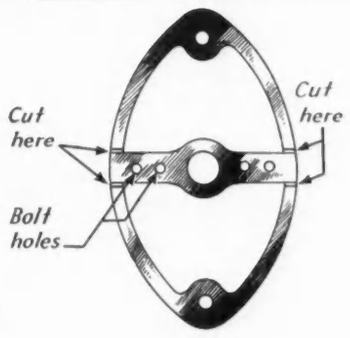


FIG. 4

FIG. 2

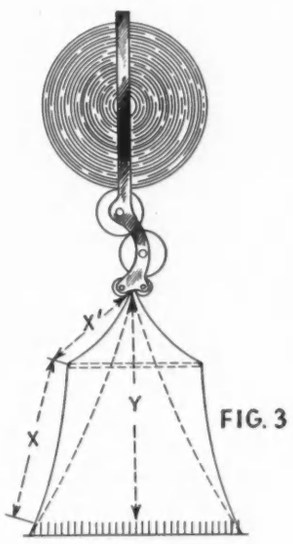


FIG. 3

Fig. 1. View of cloth roll showing bulge and point of slippage. **Fig. 2.** Schematic view of take-up mechanism showing oval and ring. **Fig. 3.** Schematic view of take-up mechanism showing fabric line when oval is used and when flat steel bar is used. **Fig. 4.** Detail of old oval to be used with flat steel bar.

FURTHER BULGING—While the cause of softness of the roll is active only through about the first third of the roll, this softness remains, so that the center of the roll is subject to further bulging. This further bulging is caused by a condition which is present from the beginning of the roll to the end, and which will be explained in detail.

From the needle circle to the take-up roll, the fabric is reduced from a circle to a straight line. This reduction results in an unequal draft on the stitches at the needle circle, as well as an unequal tension on the fabric during its passage from the needle circle to the take-up roll.

To overcome this inequality of draft, machines were supplied with rings, an oval, and a flat spreader (Fig. 2). Most knitters have dispensed with the rings, but the oval continues to be used because it carries the indispensable flat spreader. However, the oval has always been the chief contributing factor toward unequal draft on the stitches and tension on the fabric.

It can be seen from Fig. 3 that the distance $x + x'$ is much greater than the distance y, so that the same number of courses have to travel farther by route $x + x'$ than by route y in order to reach the take-up roll. This difference in distances, multiplied by the thousands of courses produced in a day, causes the fabric to stretch at the middle of the oval while it is somewhat slack at the ends. It also causes the roll of fabric to wind tighter at the middle and, thus cause the soft part to bulge at the ends. Squeezing of the soft part out at the ends is assisted by the stretched stitches in their effort to regain their normal position. The answer to this problem seems to be to get rid of the oval.

Another objection to use of the oval on loop-wheel machines is that, when plated fabrics are being knit, particular difficulty in obtaining good covering is incurred in that part of the fabric directly under the ends of the oval. This is due to the fact that at that point the fabric is slack and does not exert a strong pull on the stitch as it is cast off. This being the case, the blades of the cast-off bur come in contact with the two threads of the new stitch while they are slack, and thus disturb their proper position in relation to each other. A strong pull is exerted on the

stitches immediately below the middle of the oval, so that the cast-off bur merely has to aid lagging stitches. But, even these stitches are under a partial strain. When entirely plain fabric, such as balbriggan underwear fabric, is being knit, the greatest number of tucked stitches occurs where the fabric is under the least tension; viz., directly under the ends of the oval.

If the oval is done away with, some substitute must be provided to support the flat spreader. For this purpose an old oval with the cross-arms still intact, can be used. After the oval has been cut from the crossarms (Fig. 4), a ⅜x2-in. soft steel bar of sufficient length to support the flat spreader, should be bolted to the cross-arms. This steel bar should have a hole drilled at the center to admit the center shaft, and holes drilled at each end to admit the flat spreader. The fabric line from needle circle to take-up rolls, will appear as shown by the dotted lines in Fig. 3. The distance represented by this dotted line is still greater than the distance *y*, but not so much greater. A more uniform pull will be exerted on the stitches at the needles and a more even take-up of the fabric obtained, by substituting the flat bar for the oval.

A Tempest in a Steam Pipe

Proper draining method will minimize detrimental effect of high-velocity moisture

By JAMES O. G. GIBBONS

STEAM PIPES generally carry steam which moves at velocities ranging from 3,000 to 8,000 ft. per min. and sometimes nearly double that amount. A speed of 3,000 ft. per min. is nearly 35 miles per hr.; and 8,000 ft. per min. is about 90 miles per hr., which is the velocity of a fairly heavy hurricane. This would not be of great importance, were it not for the fact that the steam —unless it is superheated, which in process work it practically never is— almost invariably carries a certain amount of water along with it. This creates a tempest in the steam pipe and, if care is not taken to keep the amount of water at a minimum, it may cause considerable damage.

This is generally understood, but what is often not so readily understood is that getting water out of a tempest is quite a difficult matter. A hole in the bottom of the pipe with a drain connected to it, is all right when it is required to remove water from between two closed valves. However, it is practically useless when the water is being driven by high-velocity steam, because the water will not flow quietly along the bottom of the pipe.

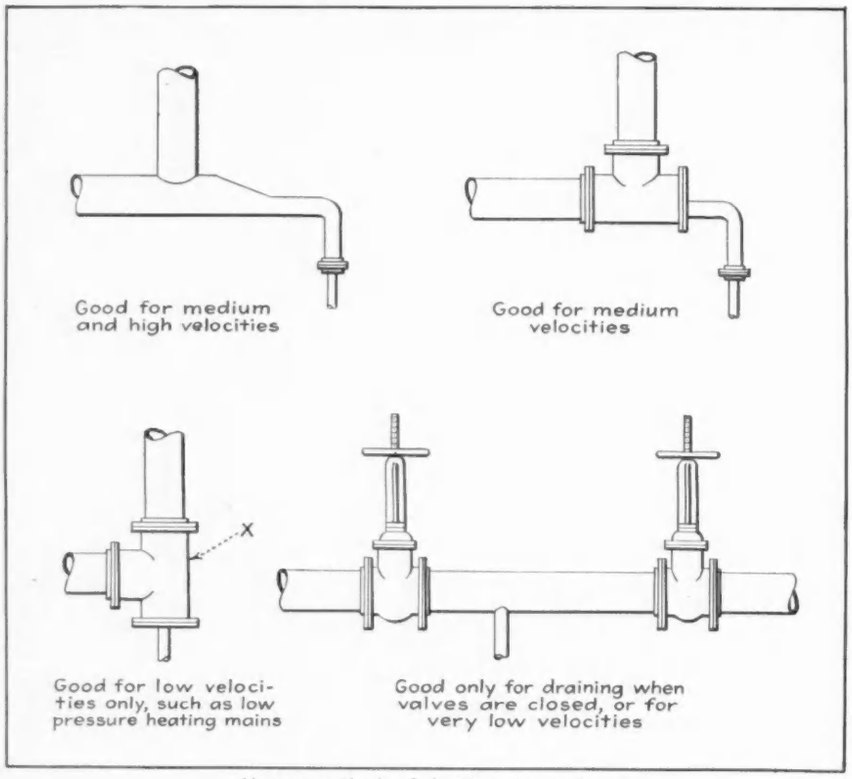
High-velocity slugs of water are almost as dangerous as high-velocity bullets, and to stop them too quickly may cause considerable damage. Anyone who has ever got in the way of a high-velocity fire stream will readily realize that. As a matter of fact, when a body of water is struck by a solid object traveling at high velocity, the water is almost as resistant as steel.

When it is important to have the steam entirely free from water, such as at the throttle of a steam engine, the best thing to do is to install a properly designed steam separator. However, the throttle is not the only point at which damage can be done. The rest of the piping should be kept reasonably free from water. This can be accomplished by intelligent designing; but not simply by cutting a few holes in the bottom of the pipe.

ELIMINATING WATER. The accompanying illustrations will indicate some methods by which this can and cannot be done. As far as the mere elimination of water is concerned, the arrangement shown in Fig. 1 should be quite effective. But if the steam is traveling at high velocity, this arrangement will not only be noisy, but dangerous, as slugs of water striking the fitting wall at *X*, may fracture it. However, this is a good arrangement for low-pressure heating systems.

Shown in Fig. 2 is a drain at the bottom of the pipe, which, as already stated, is practically useless when the steam is flowing. However, it is the standard method of getting rid of condensation when the valves are closed.

Figs. 3 and 4 are more or less identical in principle, except that the arrangement shown in Fig. 4 offers less obstruction to the flow of high-velocity slugs of water. Of course, these slugs tend to continue in a straight line. These assemblies may not get rid of a great deal of spray; but they will eliminate dangerous slugs, which, after all, is the most important thing. It is hoped that this discussion will not be taken as a warning against high-velocity steam. The present tendency is towards at least reasonably high velocities, and this tendency has everything to recommend it, not only as regards first cost, but on account of lessened radiation losses. However, just as in the case of high-speed automobiles and other high-speed machinery, it calls for intelligent design and operation.


Good for medium and high velocities
Good for medium velocities
X
Good for low velocities only, such as low pressure heating mains
Good only for draining when valves are closed, or for very low velocities

Various methods of draining steam pipes

QUESTIONS & ANSWERS

Producing Long-Nap Finish

Technical Editor:

Will you please let me know what stock is used in making the attached sample of woolen cloth; also what method was used to obtain the long-nap finish which this cloth has? (8630)

The stock in this fabric appears to be of the crossbred or cheviot type, although it is quite possible some reworked wool of similar staple and general characteristics might be used with it. Dry napping is more suitable for fabrics which are subjected to little or no fulling, to which class this cloth belongs. We suggest use of a double-acting wire napper; the amount of napping and the density of cover are, of course, regulated by the quality of the raw material, strength of the woven fabric, and the effect desired. In the fabric in question, the long nap results from the fibrous nature of the stock employed, and the bringing of the nap to the surface gradually by a series of operations, thereby preventing needless destruction of the fiber.

Streaks in Knitted Fabric

Technical Editor:

Inclosed are two samples of cloth, knit and finished exactly alike, on the same machine, of the same yarns, and the same finishing processes, with this exception: Sample A is knit with a right diagonal stitch and sample B with a left diagonal stitch. The processing of this cloth is as follows: knitting, soaping, fulling, washing, extracting, napping, drying, shearing, and sponging.

If you will examine these two fabrics carefully and hold them up to the light and look through them, you will notice that sample A is even, while sample B shows quite a few lines or streaks due to some cause.

I would like an opinion from you as to what you think causes these streaks. (8659)

It is our opinion that the backing being put in on a left diagonal or on a right diagonal should not make any difference as far as streaks or ridges in the fabric are concerned.

Examination of the length of stitch shows that every sixth feed has a slightly tighter stitch. Examination of the fabric also discloses that the streaks occur at every sixth feed. It is possible that the slight variation in stitch does not give the ridgy or streaky appearance. However, we are of the opinion that the trouble does occur in the knitting at every sixth feed and does not happen in any of the finishing processes.

It may be that there is a slight variation in the backing yarn, either as to the yarn itself or as to the tension upon it as it runs into the needles. We suggest an accurate check of both the yarn and the knitting machine settings.

Patterning of Slub Yarn

Technical Editor:

We have been having trouble with our slub filling patterning on 40½-in. fabrics, which have a reed-width of 43.80 in. The yarn will stretch in places as much as 5% or more. We are using 23s spun-rayon yarn with slubs approximately 3 in. from center to center.

Patterning can be eliminated by quilling the filling, but we do not want to pay this extra cost of quilling. We are also making 51- and 58-in. widths of this fabric, and have experienced no trouble with patterning in these widths. (8632)

Evidently there is a relation between the width of the cloth and the distance between the slubs. When a box loom is being used, it is a good plan to use two shuttles for the novelty yarn, inserting alternately two picks from one shuttle and then two picks from the other, for this breaks up the regularity of the nubs or bunches. Care in planning the cloth width so that it does not correspond to the repeat of the bunches will help in obviating the trouble.

If the trouble is not eliminated, a slightly finer reed should be used. Suppose a 30-dent reed is being used on 40½-in. goods. Then by changing to a 30.3-dent reed, the trouble might be eliminated, and the cost would be less than that of quilling. The trouble might also be eliminated by making a smaller or larger bobbin on the spinning frame.

Soft-Nose Quills

Technical Editor:

I have No. 90 Universal Winders and changed part of each side to left wind. I am having trouble with soft-nose quills. This filling is wound with 7 wind, about 60 grams tension, 300-denier bright Celanese. I have put in new clutch springs and done everything I ever did in other cases like this. It will run probably half a day, then make 2 or 3 soft-nose quills, then run all right again. This is mostly on left wind. I would appreciate very much if you could give me some idea as to how to remedy this trouble. (8526)

Most likely your trouble is in not changing your porcelain guides to the reverse-wind type when you changed over your machines. If you have done this, and the trouble persists, check on your clutch clearance. This should be less for left wind, due to the machine set-up. Also check your tensioning; it may be that by raising or lowering the operating position of your tension arm you can assist the brake to function better. It would be wise also to have your yarn tested for oil content, particularly in regard to uniformity.

Life of Condenser Apron

Technical Editor:

What should be the approximate average life of the rub-roll or condenser aprons used on woolen cards? (8538)

Although the numerous factors having a bearing on apron life make it impossible to set an exact figure, we believe that three years represents a good average life expectancy for run-roll aprons. Apparently there is no unanimity of opinion on the subject, since one mill advised they consider 2 to 3 yr. a good average, another said "about three years," and a third suggested aprons might last as long as six years.

When considering the length of time aprons will run the following facts, among others, must be taken into consideration: kinds of stock carded, how hard the roving is condensed, initial quality of aprons, care in splicing and placing on machines, proper oiling and conditioning of aprons, etc.

Thin Places in Worsted Yarn

Technical Editor:

We are running some fine wool—5 inches, longest fiber, spinning to 2/20 worsted count, on the Bradford system. We have been troubled with thin places at irregular intervals in the yarn. Could you please give me some idea as to what draft, ratch, dram roving, number of doublings, and number of operations would be necessary to produce a good yarn from such a staple, bearing in mind that it varies from 5 in. to 2 in.

The can gill has a 2¼-in. front roll, ⅜-in. screw pitch. The spindle gill has a 3-in. (scratch flute) front roll, ¼-in. screw pitch. The drawing has 4½-in. front rolls and the spinning has a 4-in. front roll. The drawing has seven operations: two gills, four drawing, and one rover. (8503)

The top submitted is of 64s quality. The maximum staple is 4¾ in. and average staple by approximation is 2¼ in. 30.75% of the staple is 2 in. or less; 80% is 3 in. or less, which leaves approximately 20% of the staple which exceeds 3 in. in length.

The top itself is suitable for the pur-

pose, in that a very good 2/20s should be produced from it. However, such a top requires the right set of drawing and this is what you do not have. This wool should not be put through gill boxes such as are in the set of which you give particulars, for the following reasons. When a faller has just dropped on the can gill the distance between the front-roll nip and the first faller will be at a maximum of approximately 1⅞ in. Naturally, any fibers lying in this zone will respond to the drafting action and pass forward as a group every time a faller drops. In addition other fibers slightly longer may move along with these, due to lack of control. In this way grouping of the fibers starts at the can gill.

When the wool reaches the 2-spindle gill it meets with an even worse condition as regards lack of control. We note that pitch is given as ¼ in. but believe this may be in error unless the machine happens to be an intersecting gill box. The front roll diameter of 3 in. leads us to believe that the pitch is about ½ in. The maximum uncontrolled distance will be approximately 2¼ in. Further grouping of the short fibers will result, and no matter how carefully the stock is handled on the drawing boxes the yarn will be uneven. If drafts are too high on the gill boxes, the poor gilling will be made worse.

Even if it were possible to obtain a good end from the gill boxes, the drawing boxes present another problem—proper ratching. Judicious use of twist, together with proper carrier settings, can offset this to some extent on the heavy end, but on the last two operations proper control of the shorts is difficult, if not impossible. The ratches should be set as indicated in the accompanying drawing layout. We doubt that the rover can be set less than 5½ in. ratch. Following is a drawing layout which should improve evenness of the yarn, but we believe the yarn will still not be even enough for commercial standards. We feel much more satisfactory results will be obtained by use of a new set of drawing. If that is out of the question, the gill boxes should be changed.

This layout is not considered to be good practice. It is designed to fit the special conditions presented in this query. We have assumed a top of 3 oz. per 5 yd.

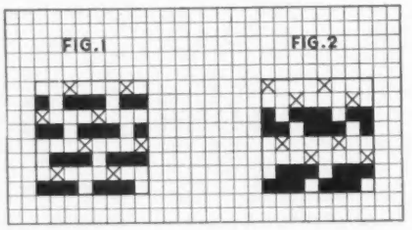
Due to contraction all the calculated drafts after the can gill box will be increased about 3 to 3.5%, depending on twists. Two ends are used at the rover, in order to offset the tendency to unevenness and to obtain better control. Doublings have been sacrificed so that lower drafts could be used. Gill boxes should be run at as slow a speed as is possible while still maintaining production. Twists should be kept slightly on the high side where the ratches are too open.

Blanket Weaving Problems

Technical Editor:

I would like to get your assistance in the following problems: (1) How can a plaid be introduced in a cotton-warp blanket? Will contrasting warp ends of cotton be suitable or should wool yarn be used for the plaid both warp and filling? (2) In making a cotton-warp blanket with the face a different color from the back, is a pick and pick loom necessary or can a 4x1 automatic be used? Please give draft and chain for same. (8537)

The introduction of a plaid in cotton-warp blankets is, in our opinion, not practical. Almost without exception the construction of these blankets is non-square in character; i.e., the cotton warp ends are much finer than the woolen filling yarns, with the latter predominating in weight and cover. In this way the warp ends are more or less completely concealed after finishing, resulting in a decidedly woolen appearing and handling product. Therefore, it will be readily seen that the production of plaid



effects in this construction is outside the scope of practical application.

However, providing square-cloth construction is followed; i.e., cloths made with similar counts of yarn and ends per inch of warp and filling yarns, plus the use of a balanced weave, little or no difficulty should be experienced in obtaining properly balanced plaid effects. As a general rule, the warp direction of the plaid is arranged and colored in such a manner that the resultant effect appears stronger in the loom than the filling plaid crossings, which are further influenced by the nature of finish to which the cloth is to be subjected. Experience and experimentation will soon enable the designer to judge the degree of contrast necessary between warp and filling colorings in order to obtain the most satisfactory and harmonious results.

Introduction of woolen yarns in the warp is not recommended, as the difference in felting or shrinking properties of the cotton and wool fibers would in all probability result in cockled effects and a surface of a very uneven character. As regards the second part of your question, if you employ the weave shown at Fig. 1, which is arranged one pick face and one pick back, alternately, a pick and pick loom is absolutely necessary. This type of weave and order of picking is widely used in the manufacture of all heavily felted fabrics composed of woolen filling and cotton warp. It is customary to use much thicker filling than warp in this structure, with the picks predominating over the ends, thereby enabling the felted or raised finish that is applied to the cloth entirely to conceal the warp.

The same effect, however, can be obtained by the use of weave shown at Fig. 2, which has the filling arranged two face, two back. By adopting this method the cloth may be woven on a 4x1 automatic loom. Moreover, by using two shuttles for each color, the filling on both back and face can be fairly well and evenly mixed, thus reducing the danger of barriness due to yarn unevenness and other spinning irregularities.

Streaks in Silk Binding

Technical Editor:

We are manufacturers of seam binding containing Japan yellow raw silk warp and tram filling. We have more or less trouble with streakiness in this binding. We do not know whether it is in the raw silk, the tram, or in our weaving. We are enclosing a few yards of this binding; you will readily see just what we refer to. We would appreciate any information as to how this trouble can be overcome. (8510)

After carefully inspecting the two samples submitted we believe your principal difficulty is either in using damaged reeds or in mistakes in reeding. In materials of this light texture uniformity of reeding is essential. We would advise a close inspection of your reeds to determine if any wires have become bent and are leaning against adjacent wires.

We also note "lay marks" across the fabric. These would indicate there is a bow in the lay, either due to lack of a center pitman or crankarm or a loose strap or bearing in one of the pitmans.

Unevenly Dyed Rayon Yarn

Technical Editor:

Inclosed you will find a skein of 300-den. rayon. We dyed 500 lb. of this yarn to the shade of tea-rose shown by the sample. You will note that where the string is tied it is lighter in shade. This blotchy effect was all through the lot. Can you advise us how to eliminate this trouble? We dyed a 500-lb. batch of the same yarn the same shade previously, and it came out good and even. Using the same process the next batch came out uneven. We noted that during dyeing

the blotchy part of the skein felt very greasy.

The method we used is as follows: the yarn is dyed in an open tub on sticks at 125° F.; we use 2% olive oil soap, and 1/4% ammonia is added to the liquor. Yarn is submerged and worked for 1/2 hr. 1% glauber salt is added to the liquor and the yarn worked an additional 1/2 hour. The yarn is then extracted, and dried at room temperature. In your opinion is trouble due to the yarn or an inferior class of dyeing? (8618)

The unevenness of this sample might arise from several conditions. While it is better to have the yarn well scoured before commencing the dyeing operation, reasons of economy make it desirable to scour and dye at the same time, using a soluble oil or one of the newer detergent materials in the dyebath. There may be mineral oil in the yarn, and this should be removed by a bath of excellent emulsifying properties, or it will cause resisted places on the yarn similar to the ones in the sample submitted. A moderate temperature and slow dyeing is necessary when working in a hand tub. Also, set the yarn up on two sticks instead of one and turn it without touching with the hands, which tightens the bands and frequently spoils the good winding quality of the yarn. Practically all direct dyes on the market which would be used for this shade are sufficiently level dyeing at low temperatures.

Silk Hosiery Yarn

Technical Editor:

By experience hosiery knitters have found that hygroscopic silk produces a better fabric. But why is hygroscopic silk preferred by the knitter and why does this type of yarn make a superior fabric?

For some time our laboratory has been trying to discover why silk should be treated or soaked to make the yarn hygroscopic. We have found that the present-day methods of soaking produce hygroscopic yarns, but that more power is required to knit such yarns when they are run through water on the knitting machines. This is due to the fact that the yarn absorbs water and increases in diameter. If hygroscopic silk is knitted directly from the cone, it produces a sleazy fabric; on the other hand, if we take the same yarn and run it through water, we find that we produce a very good fabric. Apparently, the water makes the yarn more pliable.

Tests show that different lots of silk received by the knitter vary in the degree of wetting-out, which in turn affects the knitting operation. These various wetting-out degrees cannot be helped and are expected, because the throwster uses the same soaking formula on different lots of silk. Although there are tests which show variation from bale to bale in raw silk, there is no test to show just how to treat various lots of silk so as to give them the same wetting-out properties.

We are now attempting to prove that tension must be applied to the hygroscopic yarn if it is to be run without passing through water. Tension on the yarn is a matter of great importance to the knitter, and one which has more or less been overlooked. However, if the knitters were to stop their machines and change the tension to suit the yarn they receive today, they would lose on production, due to the variations in the yarn from lot to lot.

Throwsters must please the knitters. How can that be accomplished?

We believe that what the knitter really wants is a well-lubricated, soft, and flexible yarn that can be knit directly from the cone and not passed through water. Development of such a yarn calls for close cooperation between throwsters and knitters. B.P.S.

Preventing Shrinkage of Acetate Fabrics

Technical Editor:

After dyeing and finishing acetate fabrics, similar to the sample we are inclosing, to 39 1/2 in. in width, they shrink to 37 1/2 or 38 in. when they are rewound on the tube. We should like to know if there is anything we could do in finishing so that this cloth will not shrink in width after it has been taken off the machine and rewound. (8594)

It is rather difficult to answer this question without obtaining more information regarding the finishing process used to produce the unsatisfactory cloth. A suggested method for overcoming the shrinking after finishing is to size and dry the goods as usual, then frame the cloth twice in order to set the fabric. The last framing is done 1/4 in. above the desired final width. A single framing is generally insufficient to set the fabric permanently.

An alternative method would be to decatize the goods. This sets the cloth at a width about 1/2 in. narrower than that at which it entered the machine. It is necessary, therefore, to frame the goods slightly wider before decating. The latter method will result in a flatter and more lustrous cloth.

Scouring Alpaca Yarn

Technical Editor:

We recently scoured an alpaca yarn made out of a parti gray top. After the first scouring the yarn came up with a decidedly brownish cast; however, upon rescouring several times it gradually turned to a nice clear gray. As we have had this experience before, we believe there is some kind of dirt or discoloring in the gray alpaca top, and we are wondering if you could advise us if there is some agent which can be used in the scouring to take out this brownish cast in a single scour. (8582)

Without seeing the alpaca yarn or the wool from which it was made, it is quite difficult to state the reason for this condition. One of the following reasons might be the cause: (1) The wool oil used on the stock in spinning might be composed of a large percentage of mineral oil which had not been filtered or refined to a sufficient extent. Oils that have not been filtered and processed sufficiently contain a carbon residue, which on exposure to light and air filters out of the oil and is deposited on the fibers, where it holds with a tenacity that makes it difficult to remove with ordinary scouring methods.

(2) The alpaca stock itself might have contained urine-stained wool. This is difficult to remove in itself and requires a long, thorough scour. Frequently a certain amount of bleach, such as peroxide or a perborate, is needed in conjunction with the soap and soda ash of the scouring bath.

(3) The scouring formula may be out of balance. There may not be sufficient soda ash used with the soap to give the bath enough bite to cut the oil, dirt, color, and other impurities found in the yarn.

(4) The bath may be crowded. There may be too much yarn for the amount of solution in the bath and hence not enough mechanical action to the bath to emulsify and carry the foreign matter from the yarn.

(5) If the yarn appears yellow after drying but not as it comes out of the scouring bath, it might be an indication that too much alkali is being used and it is not rinsed out of the goods. In such cases, the heat of the dryer causes this alkali to burn the wool more or less.

Corrections

In the article "Roving Bobbin Build," May, 1939, page 100, the last statement in the graph appeared by mistake. The lay curve should be read directly for both carded and combed roving, since staple length has no effect on lay.

J. L. Brannon advises us that in the first paragraph of the article "Spun Rayon Discussed," June, 1939, page 74, beater speed should read 600 r.p.m., and not 200 r.p.m. as reported; also that he was running a 14-oz. (not 55-oz.) lap and a 55-grain sliver on cards and drawing.

COTTON SECTION—Chapter VI (Continued)

BY IVAR MOBERG

Picking Motions

Batwing picking motions differ from those of the cone type in that the picking ball moves onto a stationary cam surface, which it displaces each time it comes around. This type of motion is quick to return to normal position after the pick; hence its general use on wide looms of the pick-and-pick type, on which this quick return is essential.

Fig. C57 illustrates a batwing picking motion and its component parts, as applied to a Crompton & Knowles Type C-4 loom. Sketch *A* shows a right-hand picking-shaft assembly, *B* part of a left-hand picking-shaft assembly, *C* a picker-stick check on the drop-box side, *D* and *E* a foot-lever arrangement by means of which a weaver can force the shuttle out of the box merely by pressing the lever down. Adjustment and timing of this type of motion is described in the following paragraphs.

Place the collar, the batwing, the picking-shaft stop, and the picking arm on the square picking shaft. The location of the batwing on the picking shaft varies with different types of looms and conditions. If the proper position is known, locate and tighten the batwing in the correct position before the picking shaft is placed in the loom. If the correct location is not known, a starting point must be found. The various locations of batwings are so numerous that this constitutes a rather individual problem. However, the method used in properly locating the batwing is diagrammed in Fig. C58. The measurements given are for Type C-4 looms and may not be correct for other types of looms. The starting point is found by inserting the picking shaft in the picking-shaft bearings and adjusting the bearings so that the picking shaft will be level, and turn freely without any end play. Next, turn the loom over until the picking-roll arm is vertical and points downward, then slide the batwing along the picking shaft until it is in a position that will cause the picking roll, in the center of the slot, to contact the batwing 1/3 to ½ of the way up to the top of the picking curve. Temporarily tighten the batwing at this point.

Attach the return spring to the picking-shaft stop and, by means of the adjusting screw in the stop, tilt the picking shaft until, when the loom is turned over toward the picking position, the picking roll will contact the picking curve on the batwing ½ to ¾ in. from the beginning of the curve. Continue to turn the loom until the picking roll has fully displaced the batwing and is resting at the top of the picking curve. Then move the picking-roll arm laterally on the camshaft until the point of the picking curve will be in the exact center of the roll.

Adjust the picker-stick stud in the slot of the rocker iron so that the picker stick will be in vertical position when it is held in the center of the stroke. Attach the picker-stick spring to the lower end of the picker stick and to the spring stand on the rocker shaft. Loosen the spring-stand cap and move the spring stand until approximately proper tension has been obtained. This tension is finally adjusted when the picking motion is fully assembled; proper tension is such that the spring will just be able to pull the picker stick back, after the pick, without any hesitation. On pick-and-pick looms it is essential that the picker stick be quickly returned to its normal position.

Place the sweep stick on the picking-arm stud and connect the lug strap. Fasten the power strap on the picker stick in such a manner that the lug strap and sweep stick will have a slight downward pitch toward the picking arm. Adjust the length of the lug strap so that there will be from ½ to ¾ in. play between the end of the lug strap and the picker stick when the latter is in extreme back position. This should give a stroke to the picker of approximately 8½ to 9½ in., although the loom can be set for as much as 12 in. sweep. Generally, the wider the loom, the more sweep is required for smooth picking.

Turn the loom over and check the timing of the picking. The picker stick should start to move when the loom is on top center, or up to 15 crankshaft degrees later, depending upon individual conditions. Move the picking-roll stud in the picker-arm slot until the proper timing is obtained. Sometimes the proper timing is beyond the capacity of the adjusting slot in the picking arm; in such instances it will be necessary to disengage the driving gears and remesh them a tooth or two on either side. Then the final, fine timing can be made by means of the adjusting slot.

Courtesy of Crompton & Knowles Loom Works

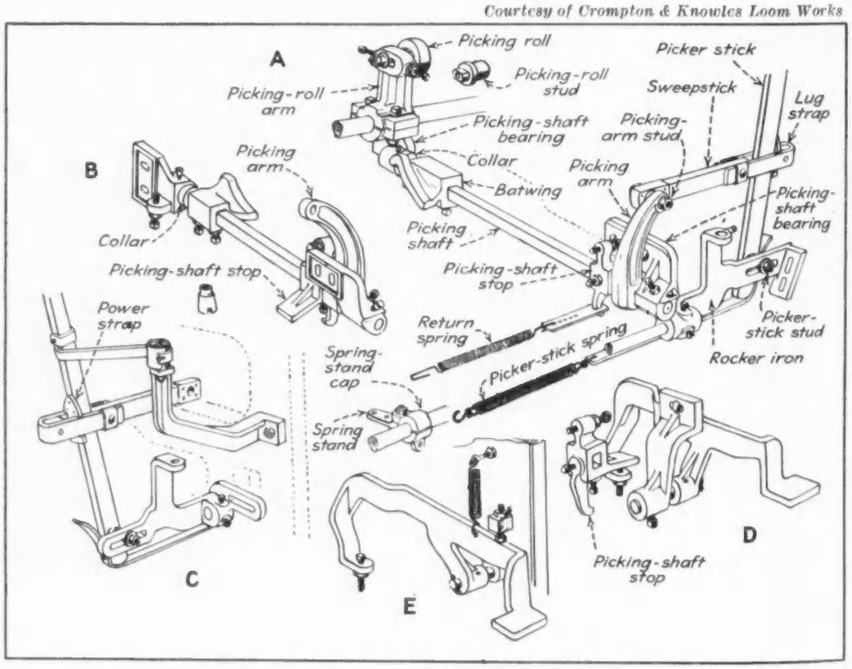


Fig. C57. Diagrammatic view of batwing picking motion

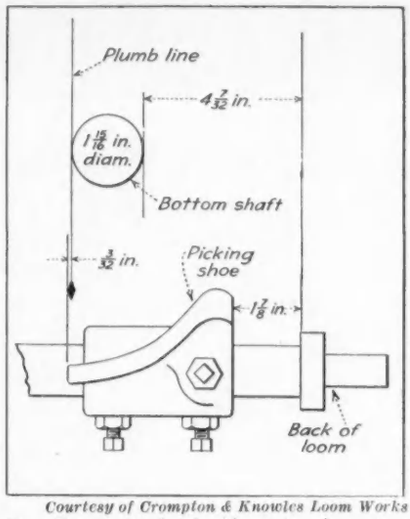
Whenever the batwing has been moved on the picking shaft to give more or less force to the pick, it is necessary to recheck the timing and the length of the stroke.

The batwing picking motion may work in conjunction with a parallel motion, in which case the picker is in a fixed position on the picker stick; or it may work in conjunction with a fixed picker-stick pivot, in which case the picker must slide up and down on the picker stick. If the picking motion works in conjunction with a parallel motion, the same setting as given under cone picking motion applies from this point on.

If the pivot on the picker stick is fixed, as was the case in Fig. C57, remove the picker rod and make sure it is perfectly straight. Never bend a picker rod under any circumstances, nor permit a loom to run with a bent picker rod. Next, check the position of the picker rod and see that it lies parallel in its supports, in relation to both the box floor and the box back. With the picker rod out, place the picker on the picker stick and insert the picker in the opening at the back of the picker slot. Insert the picker rod, after making certain the leather bumpers for the picker are in good condition and of proper size. Adjust height and lateral position of picker rod so that the picker head will center on the point of the shuttle in box.

NOW PICK BY POWER, placing one hand on the reed cap and picking one pick at a time. The force of the picking can be felt through vibrations and, with experience, a loomfixer learns to tell whether the picking is near enough correct that the loom can be started up. Decrease or increase binder pressure until it is just sufficient to prevent shuttles from rebounding.

Next, raise or lower the lug straps, as may be required, until the force of the pick is just sufficient to run the loom without banging off. When the proper force of pick is obtained, note the pitch of the sweep stick and the lug strap. If the pitch is toward the picker stick, move the batwing on the picking shaft about ¼ in. toward the front of the loom. This gives more force to the pick and the lug strap can be raised. Repeat, if necessary, until the sweep stick and lug strap pitch slightly downward toward the picking arm. If the lug strap is too high on the picker stick, move the batwing toward the back of the loom and drop the lug strap to the proper pitch. The timing and stroke of the picker stick must be rechecked after each of these adjustments. When the proper adjustments have been made, and a smooth pick obtained, measure



Courtesy of Crompton & Knowles Loom Works

Fig. C58. Method of locating batwing on picking shaft of Type C4 loom

the distance between the batwing and the rear picking-shaft box, and set all other batwings to this measure.

It is important that the picker rod be oiled before starting the loom, and that it be kept well lubricated all the time the loom is running. The lubricant must be applied sparingly, but often, so that the picker will not throw oil on the fabric being woven. Modern looms have self-lubricating picker rods.

PICKER-STICK CHECKS are important adjuncts to good weaving. An efficiently operating picker-stick check, or shuttle check, as they are sometimes called, is essential to smooth picking. The object of the picker-stick check is gradually to bring the shuttle to a stop after its travel across the loom, and to compensate for the increased weight of a shuttle after a full bobbin is placed in it. The picking motion must have enough force to drive an almost empty shuttle across the loom, but this force would be more than that required by a full shuttle, which would have a tendency to rebound if it was not gradually stopped by the check, in conjunction with binder pressure.

Although numerous devices have been invented to act as shuttle checks, the friction picker-stick check sketched in Fig. C59 is widely used.

To set the check, insert a strap of proper length, which depends upon the length of the picker-stick stroke, between the two friction bars at the front of the lay, with the grain side of the strap toward the back of the loom. Loop the strap around the picker stick and bring the ends together at the back of the check-strap holder. Place a bolt, with the strap guide, so that it will be in the center of the bolt slots in the two ends of the check strap, as shown in the top sketch. Temporarily slide the strap guide on the bolt to its forward position, and tighten the bolt lightly in this position. Move the picker stick against the leather bumper, which will bring the strap into the forward position shown in the middle sketch. Now let the picker stick slowly back until it is against the other bight of the check strap, but do not disturb the position of the strap. If the length of the check strap is correct, the picker stick will contact the check strap when the picker is approximately 2 in. from its extreme backward position. Adjust the length of the strap, if necessary, until this position is obtained. Move the picker stick again, so as to bring the check strap into its extreme forward position, and slide the strap guide outward until it comes within ½ in. of touching the outside bight of the check strap.

The strap guide serves to stop the momentum of the check strap after the pick, but the strap itself should not be called upon to stop the momentum of the picker stick, as this would quickly cut through the strap. Hence, there must be a clearance between the picker stick and the check strap, when both are in extreme forward position, as shown in the middle view. Similarly, there must be a clearance between the check strap and the guide when the strap is in its extreme back position, as shown at bottom. The check strap must be long enough to allow this clearance.

Now adjust the friction of the strap by moving the adjustable friction bar in or out, as required, until proper checking is obtained when the loom is running.

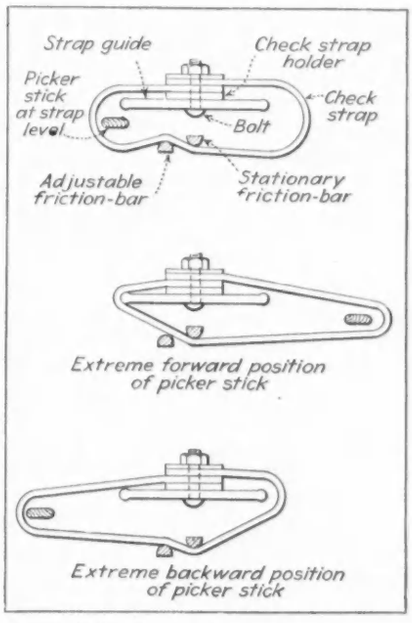


Fig. C59. Plan view of a friction picker-stick check

RAYON AND SILK SECTION—Chapter IV (Continued)

By H. E. WENRICH

Driving and Shipping

Motor drives have been applied to the majority of rayon and silk looms; hence, this installment will deal primarily with such drives. However, loomfixers caring for belt-driven looms will find many of the suggestions are equally applicable.

Fig. RS13 shows a modern loom assembly of top and bottom shafts and gears.

Fig. RS14 diagrams the order in which the various parts are placed on the top shaft in the older type of silk loom using a face friction clutch, rather than the internal expanding clutch used in the modern loom. In the older loom, the bottom and top shafts and gears are first placed in position ready for assembling of the other parts which belong on the top shaft. Next, the friction plate is bolted fast to the top-shaft gear. Care must be taken, when applying new friction plates, to make sure the plates go into position without forcing. It may be necessary to grind off part of the bolt extensions on the friction plate to make it fit properly, and this should be done. Otherwise, the bolts may be drawn too tight, and the lug through which the bolts are passed may break off. On some looms the gear and brake drum are in separate pieces, the drum being fitted over the gear hub and bolted fast. Regardless of what type drive assembly is in use, all parts should fit without forcing when bolted together.

The motor gear is now placed on the shaft. It should turn freely and easily, but should be a snug fit and not have so much leeway that the gear can be moved easily up and down.

Following this the bracket, fiber washer, friction collar, and handwheel are placed in position.

THE CRANKSHAFT, when necessity requires, can be removed by lifting it out the drive end. This can be done while there is a warp in the loom. Where back aisles are wide enough, a loom to be repaired can be swung out of line on the drive side, keeping in place the front lug on the opposite side. This procedure assures plenty of working space and, after the repair has been made, the loom can be swung back into place.

On looms equipped with boxes and caps, the bottom shaft can be removed, without slipping it through the bearings, by simply lifting it out of the boxes after the caps have been removed. On some looms it is necessary to take off the entire drive assembly when removing a worn crankshaft gear. Other types of looms require that the crankshaft be raised when it is desired to remove the bottom shaft or gear. In doing this, first loosen all crankshaft caps. Then lift the crankshaft, by means of a block of wood placed on the loom frame beneath the bearing on the drive side, or beneath the crankshaft itself, if the shaft can be lifted out of the box. This block must be high enough to allow the bottom-shaft gear to pass beneath the crankshaft assembly. Likewise, when repairing broken brake-drums on some looms, the crankshaft must be lifted to allow the brake-drum to pass over the top of the bottom-shaft gear. When in doubt as to what method to follow, loomfixers should first inspect the assembly before removing any part.

When a motor gear or belt pulley runs dry, the crankshaft may be worn deeply. At times when the part is dry and the hub is worn badly, a chatter which is discernible when the loom stops will give warning of the trouble. Another way of finding this trouble is to hold the handwheel with one hand and pull lightly on the shipper handle with the other hand. A worn shaft will generally result in a jerky, vibrating motion being transmitted to the hand holding the wheel. When the shaft or pulley on the belt drive is badly worn, the chatter is transmitted to the belt, giving a jerky motion that is readily seen.

To make a worn shaft usable, apply a motor-gear or pulley with a hole large enough so that a bushing can be fitted over the shaft. The bushing is fastened to the shaft by means of safety setscrews and its application will result in a new surface for the gear to run on, thus eliminating the chatter. Motor gears with removable hubs can easily be repaired by inserting a collar bushing in the hub, as indicated in Fig. RS14. If the hub bore and/or shaft is worn, the hub bore is enlarged for insertion of a collar, which is slipped over the shaft end. If the shaft is worn, a bushing which will fit the worn shaft should be used. If the shaft is not damaged, a new hub of normal diameter can be used. Should the gear be worn out, but the hub still good, simply place a new gear on the old hub.

Courtesy Crompton & Knowles Loom Works

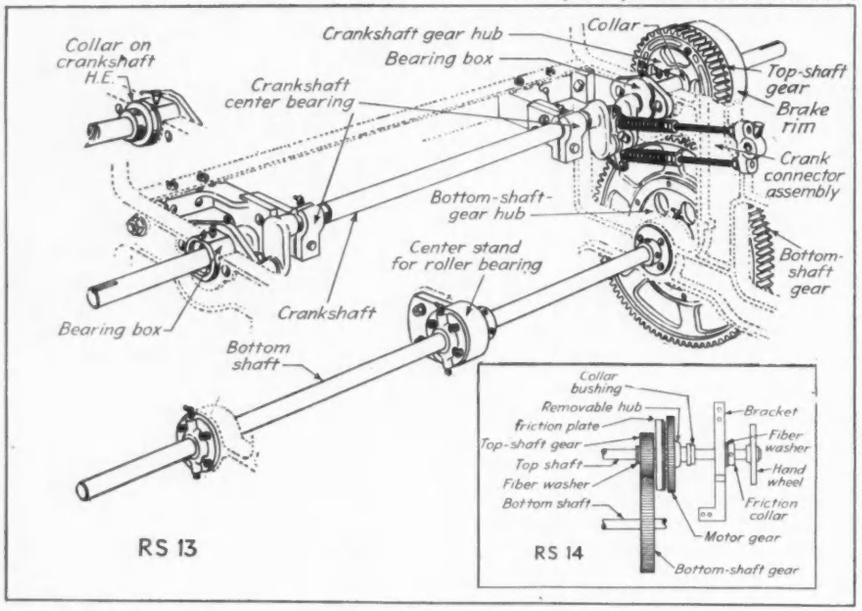
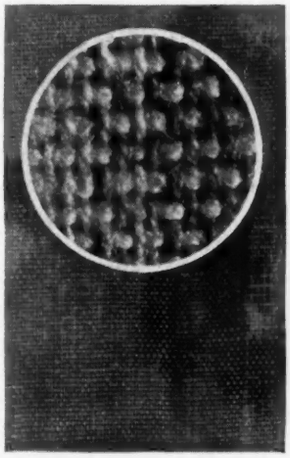


Fig. RS13. Assembly of top and bottom shafts and gears for modern loom
Fig. RS14. Diagram showing order in which parts are placed on top shaft

STAPLE COTTON FABRICS

By JOHN HOYE
Fabric Technician with W. Harris Thurston, New York

This forty-fourth installment of Mr. Hoye's series of articles on staple cotton fabrics—which began in the January, 1936, issue—begins the discussion of drapery and slip-cover fabrics



Shadow warp cretonne, 36 in., 58x38, 3.25 yd., 2-ply warp and single filling

DRAPERY and slip-cover fabrics can be divided into two general classes; viz., converted fabrics and colored-yarn woven-design fabrics. Converted fabrics usually are either printed with floral patterns or piece dyed in solid colors. Most drapery fabrics are made of dyed yarns and with woven designs, while most slip cover fabrics are converted. The yardage of slip-cover fabric used is much greater than that of drapery fabric.

Converted Drapery and Slip-Cover Fabrics

Converted drapery and slip-cover fabrics are known as cretonne, crash, and chintz. They usually are converted by roller printing with suitable colors and designs on various weights of such basic gray cotton fabrics as print cloth, sheeting, jean, sateen, osnaburg, rep, twill. Other fabrics used are linen, linen and cotton, mohair and cotton, rayon and cotton, etc. Better qualities of converted drapery and slip-cover fabric, sold as dust tight, are dyed with tub- and sun-fast colors. Some of these fabrics are preshrunk.

Dobby-woven fabrics, piece-dyed in solid colors, are used mostly for draperies. Also used for draperies are damasks of cotton, or cotton and rayon, woven unbleached and then piece dyed. Damasks made with acetate rayon warp and cotton filling, or with viscose warp and acetate filling are cross-dyed in two contrasting color effects. (Suitable shades of these fabrics are used also for men's bathrobes.)

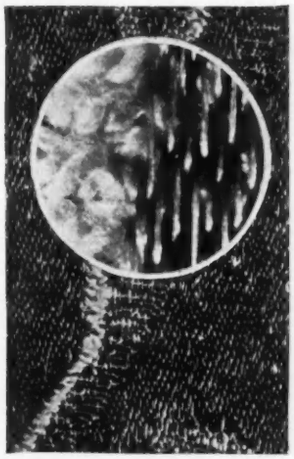
Another fabric used mostly for draperies is printed-warp cretonne, called shadow warp cretonne. The warp (2-ply) is run through a warp printing machine and printed the required colors before being woven into the fabric. Even tension throughout is necessary; otherwise the pattern will be distorted. This printed warp usually is woven with white filling, which modifies or softens the colors of the design. Sometimes colored filling is used to modify the colors still further. Because of the difficulty of printing this type of fabric, there is a limited production, most of which is imported from England. Hence, this type of cretonne is quite expensive.

Printed-warp cretonnes are imitated by printing both sides of a domestic fabric woven with white warp and colored filling. The design is registered so that the pattern appears in the same position on both sides of the fabric.

Fabrics used in converted cretonnes have been discussed in past installments as follows: print cloth—January, 1936; osnaburg—May, 1936; sheeting—July, 1936; rep—August, 1936; jean, 4-leaf warp twill, 3-leaf filling twill—October, 1936; filling sateen—February, 1937; warp sateen—March, 1937.

Converted drapery and slip-cover fabrics with their gray constructions:

36-in. cretonne, 37 in. 27x48 4.00 sheeting.
48-in. cretonne, 50 in. 96x64 2.20 jean.
48-in. cretonne, 50 in. 60x48 2.10 rep.
35/36-in. cretonne, 37 in. 108x56 3.00 warp sateen.
48-in. cretonne, 50 in. 60x56 1.65 plain weave, cotton warp and 50% mohair and 50% spun rayon filling.
36-in. cretonne, 37 in. 88x40 3.00 4-leaf warp twill.
36-in. cretonne, 39 in. 68x76 4.00 3-leaf filling twill.
36-in. crash, 38 in. 32x28 2.85 part-waste osnaburg.
50-in. crash, 52 in. 40x28 1.74 10% linen.
36-in. chintz, glazed finish, 30 in. 68x72 4.75 print cloth.
35-in. chintz, glazed finish, 36 in. 48x52 4.70 sheeting.
36-in. chintz, schreinered finish, 37½ in. 64x104 4.37 filling sateen
36-in. chintz schreinered finish, 39 in. 96x160 3.35 combed filling sateen.
50-in. dobby-woven fabric, 52 in. 34x32 1.22 chevron stripe, ply yarns.
54-in. dobby-woven fabric, 56 in. 46x40 1.62 all-over dobby pattern, ply yarns.



Jacquard-woven damask drapery fabric, 50 in., 144x26, rayon warp and cotton seed-yarn filling

Yarn-Dyed Woven-Design Drapery Fabrics

The most widely used drapery fabric is some form of woven damask. Drapery damasks are lustrous, soft-draping, decorative fabrics of rayon; cotton; silk; cotton and rayon; or silk and rayon, woven with colored yarns and in dobby or jacquard designs. Sun-fast colors are used in the better qualities. In cotton and rayon damask drapery, generally, the warp is of rayon, either delustered or regular, and the filling is some form of cotton novelty yarn. This novelty filling may be either seed, chenille, slub, flake, boucle, spiral, or ratine yarn and is used to add distinction to the fabric. Regular, plain, heavy single- or ply-filling yarns are used sometimes, to produce a rep or rib effect.

Damask patterns used for draperies usually consist of large floral effects. The design usually is more prominent on the face side of the cloth, since on the back a reverse or only an outline of the pattern is formed. In some damasks the floats which form the design are the same on both sides, so that they produce what is called a reversible or duplex damask. Satin weaves generally are used for both warp and filling—sometimes a combination of satin and twill weaves is used. On the face side of some damasks rayon warp floats form the pattern and the filling yarns form the ground, for contrast. In other damasks, novelty filling yarns, such as seed yarn, may be used to develop the pattern, while the rayon warp yarns form a contrasting background.

(Further details on woven-design drapery fabrics will appear in next installment.)

NEWS OF THE MONTH

A Look Ahead

The Southern Conference on Human Relations in Industry marked its 20th annual session at Blue Ridge, N. C., July 13 to 15, by devoting its program to the theme "20 Years of Industrial Relations in Southern Industry and a Look Ahead." The opening address on this broad and constructive theme was made by Luther Hodges, general manager, Marshall Field & Co., Manufacturing Division, Spray, N. C. Among the speakers was T. M. Forbes, secretary of the Cotton Manufacturers Association of Georgia, whose subject was "Southern Industry and Public Relations." As usual, the Blue Ridge Conference was preceded by Conference of Southern Industrial Executives, at Asheville, July 13. Among those scheduled for the discussion on the key address was H. Gordon Smith, general manager, Tire Cord Mills, U. S. Rubber Products Co., Inc., Hogansville, Ga.

Heard Around the World

Dean Hill, president of the Durene Association of America, claims that the story of the discovery of total absorption possessed by garments made of Durene yarn and the resulting increased body coolness and comfort is reaching around the world. For example, Whiteaway, Laidlaw & Co., Ltd., one of the leading department stores in Bombay, India, which is a large buyer of Cooper's Jockey underwear, has requested a supply of Durene promotional material as they feel that undergarments made of that yarn will give increased comfort where the hot climate of India makes these qualities so desirable.

Extend Japan Agreement

The Department of State and the Japanese Embassy at Washington have arranged to continue for a further period of one year, beginning Aug. 1, 1939, the existing arrangement relating to the importation of Japanese cotton piece goods into the Philippine Islands, which would have expired July 31, 1939. Under this arrangement the Association of Japanese Exporters of Cotton Piece Goods into the Philippine Islands agrees to limit the annual importation of Japanese cotton piece goods into the Philippines to 45,000,000 square meters.

Approves Yarn Rules

The executive committee of the Cotton-Textile Institute, Inc., has announced that it has approved the Yarn Rules of 1938. These rules have been approved by the Carded Yarn Group, the Southern Combed Yarn Spinners Association and the Association of Cotton Yarn Distributors, and are being used by a great majority of the trade in buying and selling cotton yarn.

New Futures Contract

A year's wrangle between cotton shippers and cotton manufacturers with the New York and New Orleans Cotton Exchanges as judges and a cotton futures contract as the bone of contention has resulted in a new contract which entered trade on Aug. 1.

The new contract will not supersede the old contract but will run concurrently for one year, its use being permissive by the trade if mutually interested parties, such as buyer and seller, can get together on it. After one year the old contract will be abandoned.

The most radical changes in the new contract are basis of $\frac{15}{16}$ths cotton instead of $\frac{7}{8}$ths, with full discount down to $\frac{29}{32}$nds and $\frac{7}{8}$ths staple; 75% premium up $\frac{31}{32}$nds and 1 inch and better.

School Now Has Complete Mill

On July 6, when Hunter Marshall, Jr., secretary of the North Carolina Cotton Manufacturers Association, turned over to Luther Hartsell, president of the board of the Jackson Training School, Concord, N. C., an important looking legal paper, three years of work in equipping the school with a complete cotton textile manufacturing unit were concluded. The document legally confirmed the donation of the unit to the school by the North Carolina association. This program is one of the more important jobs in industrial relations undertaken by southern cotton manufacturers who felt that boys of the Jackson Training School—an institution for wayward boys—should be prepared to fill available jobs upon their dismissal from the school. The textile unit was the answer. The boys grow the cotton on the school's farm, and from their crop make ticking, denim, shirting and sheeting. From these materials needed articles for the school are made.

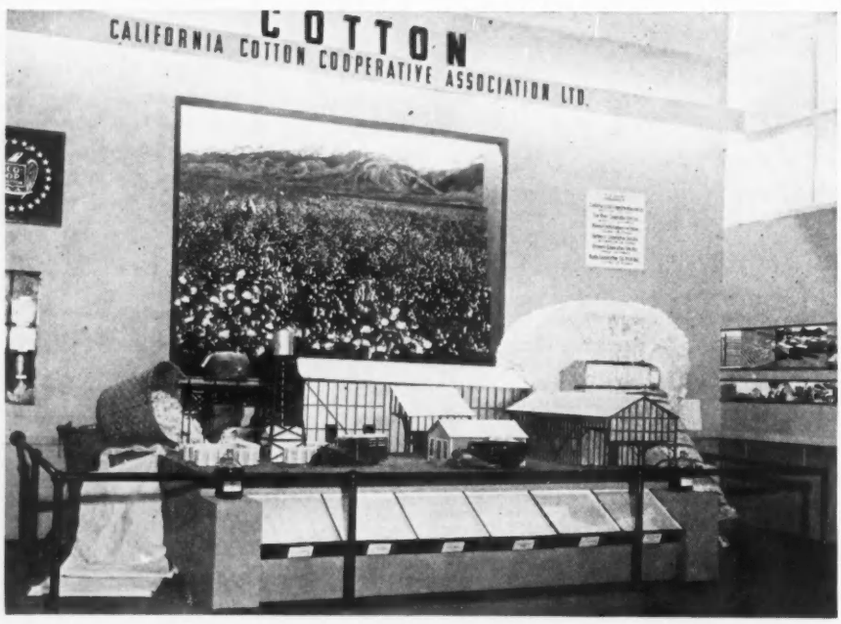


Exhibit of California Cotton Cooperative Association, Ltd., in the Hall of Agriculture, on Treasure Island at Golden Gate International Exposition, San Francisco. The booth presents an attractive visualization of cotton production, from growing to marketing, with the baling process shown in miniature, against a photo mural of a California cotton field. The exhibit is sponsored by the California Commission to the exposition.

Council in Action

With the new cotton season getting under way the South is plastered with banners proclaiming the activity of the National Cotton Council. Large outdoors signs of red, white and blue are being placed in front of all co-operating gins, cotton-seed oil mills and warehouses, and membership cards are being displayed inside the offices of producers, cotton firms, warehousemen, crushers and ginners.

The first "stamp books" are being distributed to ginners and producers. This is the plan by which the funds for the council will be raised. The stamps are printed in blue for the producer, and red for the ginner. They are one cent in denomination and will be placed on each bale of cotton grown and ginned by co-operating council members.

Another important recent move was the affiliation of the Cotton Research Foundation with the National Cotton Council, according to announcement by Oscar Johnston, president of the latter. The objectives of this Foundation, which operates through fellowships in the Mellon Institute of Industrial Research, were outlined in the October, 1937, issue of TEXTILE WORLD. Mr. Johnston states that the Council and the Foundation "will coordinate their efforts and act in unison in developing new uses for cotton."

Trying 36-Hour Week

The Chicopee Mfg. Corp. of New Hampshire is experimenting in its Coolidge Mill, Manchester, N. H., with a 36-hour week. The management has been experimenting with four shifts of six hours a day, six days a week. In the notice advising the employees of this trial, they were advised that "it is expected the average weekly wages will be not less than the present scale and that over a period of time employment will be increased considerably."

Rayon May Expand Promotion Activities

Started with a circular letter from the converters who grouped themselves together last fall under the title "Textile Distributors Institute," rayon producers gave more thought during July than they had for a number of months to revival of broader promotional activity. Promotional advertising, cut off with a kind of informal moratorium last fall, has been largely absent from the field for a number of months and merchants are searching for some plan which will permit the advantages of the discontinued system to be used without the abuses. The principal elements in holding an effective program seem to be a clean-cut plan for allocation of expense among the various hands engaged in the promotion and maintenance of control by the primary manufacturer over the amount of money spent further down the line.

TEXTILE MILL SIDE-LIGHTS—NO. 8

"Yes sir, Gus, these new glasses are just what I been needing!"

May Raise Raw Silk with Convict Labor

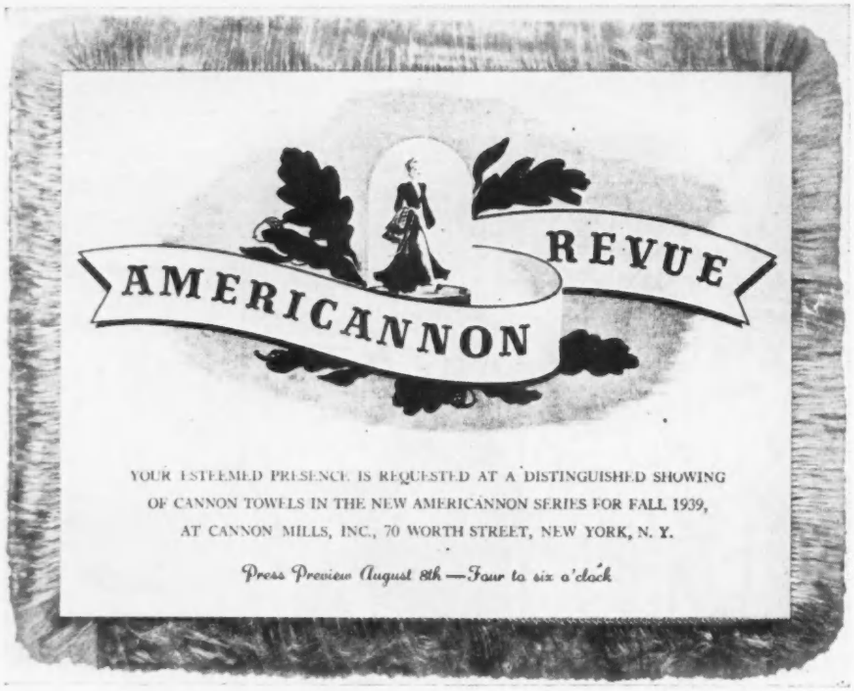
The Alabama Prison Farm at Atmore has entered into a contract for a supply of silk-worm eggs and has plans under way for planting 20,000 mulberry trees. Although silk raising in the United States is a controversial subject with an apparent majority believing it is commercially impractical, it may be noted that Francis G. Simmons, research director of the Underwear Institute, some months ago presented a plan to the Federal Government recommending that silk raising be tried out by Federal and/or State prisons. Mr. Simmons' recommendation was based on a number of points including (1) the physical feasibility of raising silk in the United States; (2) the fact that silk growing here has been held in check principally by lack of low-cost labor; (3) the value of silk to the National Defense; (4) the desperate effort of certain authorities to devise practical occupations for prison inmates on products which will not interfere with the products of existing commercial enterprises.

Warp Sizing Research

The U. S. Institute for Textile Research has selected the Textile School of North Carolina State College, Raleigh, N. C., as the place for conducting the new research project on warp sizing of spun-rayon and cotton warps, according to announcement by W. D. Appel, chairman of the research council of the Institute. The following committee has been appointed to administer the research project: Perrin N. Collier, vice-president and research director, Callaway Mills, chairman; Dr. W. E. Yelland, who was research director of the Institute's previous warp-sizing research, and Dr. Thomas Nelson, dean of the Textile School.

Greenville Cotton Festival

Greenville, S. C., will hold its first annual National Cotton Festival, Oct. 9 to 14. Plans include a pageant dramatizing the story of cotton; coronation of a King and Queen; a parade, and


AMERICANNON REVUE
YOUR ESTEEMED PRESENCE IS REQUESTED AT A DISTINGUISHED SHOWING
OF CANNON TOWELS IN THE NEW AMERICANNON SERIES FOR FALL 1939,
AT CANNON MILLS, INC., 70 WORTH STREET, NEW YORK, N. Y.
Press Preview August 8th—Four to six o'clock

Invitation to display of new Cannon towels, Aug. 8

other features. L. P. Hollis, superintendent of the Parker School District, is president of the festival, and L. M. Glenn, secretary of the Greenville Chamber of Commerce, is the festival secretary. Other officers and directors include men prominent in the textile industry of Greenville.

"Faces We See"

The book "Faces We See," by Mildred G. Barnwell, executive secretary of the Southern Combed Yarn Spinners Association, will be ready for distribution and sale next month. This important public relations undertaking represents the association's move to present the real story of mill life in the combed yarn area to the people of North Carolina and other States. The book, of which a first edition of 4,000 will be printed, is being published by Haddon Craftsmen, Inc., New York. Photographs in the book were taken by Bill Baker of North Carolina State Department of Conservation and Development. J. C. Roberts is president of the association.

To Promote Wool Knit Goods

A new organization under the title of Wool Knit Associates, Inc. has been organized for the purpose of promoting products of the wool knit goods industry. It is headed by Alvin O. Goetze of Morgan & Goetze Knitting Mills, as president. Neil MacLellan, of American Woolen Co. is vice-president. Nathaniel Pfeffer of Salta Knitting Mills is treasurer and Herman Luftfield is secretary. The organization owes its being to the initiative of Barnet S. Milman of the yarn firm bearing his name, who was assisted in his efforts by Carl Leff, of National Spinning Co. and by spinners, weavers, dyers, jobbers, garment manufacturers and others.

A. & P. to Use Cotton Bags

The Great Atlantic & Pacific Tea Co. has placed an order for more than 2,500,000 cotton flour bags, according to announcement by Paul B. Halstead, secretary of the Cotton-Textile Institute, who termed the development "a major victory in the 1939 campaign to boost the American consumption of cotton." This order is the first of many which cotton producers and processors hope to obtain from American industry this year, Mr. Halstead said.

TEXTILE CALENDAR

Southern Hosiery Manufacturers Association, annual meeting, Grove Park Inn, Asheville, N. C., Sept. 8 and 9, 1939.

American Association of Textile Chemists & Colorists, annual meeting, Copley Plaza Hotel, Boston, Sept. 15 and 16, 1939.

National Safety Congress and Exposition, Atlantic City, N. J., Oct. 16 to 20, 1939.

17th Exposition of Chemical Industries, Grand Central Palace, New York, Dec. 4, to 9, 1939.

Sixth International Heating and Ventilating Exposition, Lakeside Hall, Cleveland, Ohio, Jan. 22 to 26, 1940.

Celanese Corp. Announces Discharge Printing Process

Development of a new process for discharge printing of fabrics made with Celanese rayon yarns was announced last month by Celanese Corp. of America. The new process will be made available to users of that company's yarns. It is stated that the process does not change the chemical structure of the Celanese yarn and, therefore, the fabrics retain their original strength. The development is expected to open the way to an increase in the use of Celanese fabrics in fields which have been limited up to the present. For example, one of the chief increased uses anticipated is in street-wear garments.

Profits in Wool Goods

American Woolen Co. reports net earnings for first half of 1939 of $357,670 compared with net loss for similar period of 1938 of $4,750,487. Net sales for the 1939 period were $30,719,436 against $16,746,242 the year before.

Botany Worsted Mills reports net earnings of $300,349 for first half of 1939 against net loss of $376,852 for similar period in 1938. Sales for 1939 period were $6,741,404 against $4,262,906 the year before. This is the first time Botany has shown a net profit since 1925.

In the Textile Markets

COTTON GOODS—As a result of better sentiment and active business in cotton goods through July, there has been a tightening in spot and nearby positions of the most wanted gray goods. Prices were somewhat higher than those chalked up in June. For 38½ in. 64 x 60s, 5.35 yd. print cloths, 4¾¢ has been paid. For 39 in. 68 x 72s, 4.75 yd., 5⅜¢. There was a fair movement of branded sheets and pillow cases and broader interest in fine staple goods. Tickings were advanced to 12¢ for 32-in. 8-oz. fabric. Percales were advanced to 10½¢ for 80 squares.

WOOL GOODS—Tropicals for 1940 have been offered in numerous offices and buyers' response has been extremely irregular. Some large houses have covered fairly well, while others have done almost nothing. Prices are up 12½ to 17½¢ over last season which are said to mean a rise of $1

to $1.50 in the retail price of suits. There is still about 20% of expected fall requirements uncovered by clothiers. Raw wool and tops are both firmer, N. Y. spots rising from 84¢ on June 30 to 88¢ on July 21.

RAYONS—Activity featured the rayon market in July with particular interest in the 50- and 75-denier yarns. Acetate has been in particular demand in continuous filament as well as in staple fiber. Abraded yarns are reported well sold, but production of these is still limited. The recent activity has resulted in depletion of first hand stocks. Rayon yarn business appears more active than cloth trade at the moment.

SILKS—Under the influence of steady support in Japan and a relative scarcity of stocks, raw silks recovered during July from their uncertainty of early June, and prices moved to levels which were as high or higher than the previous peak in the market for 1939. Prices receded near the end of the month. Grade D in Yokohama began the month at about 1,195 yen per bale and by July 26 had advanced by gradual stages to 1,300 yen. At the latter time the price of Crack XX (78%) advanced to $2.78½ in the New York spot market. Early August prices were 15 to 20¢ less.

HOSIERY — Full-fashioned hosiery manufacturers have been ultra-conservative in making any real advance in prices and for the most part the small gains announced last May are still being carried through for deliveries up to Sept. 1. To retain pace with raw silk, it is imperative that further advances be made. Words of warning come from various quarters that new finishes which increase the durability of silk hosiery and new fibers which may be more durable than silk, both work to constrict the total volume of the trade. Seamless hosiery has recorded advances more in keeping with the rise in raw material.

UNDERWEAR—Withdrawal of lines and advances in prices are evidences of the firmer underwear situation. A good last-minute trade in light-weights and broader interest in fall is reported. New prices on heavy-weight cotton ribbed union suits will show advances of 50¢ per dozen to meet higher yarn prices and wage costs.

OUTERWEAR—A good clean up of men's swim trunks is reported. Staple cotton sweaters for fall have done a good business, but wool and mixed numbers have been moving slowly. The Federal Trade Commission's trade practice rules for the infants' and children's knitted outerwear industry were about as expected.

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This and That

Glidden Co., Cleveland, Ohio, is preparing to erect a pilot plant for experimental production of a synthetic fiber from soy beans. This step follows two years of laboratory work during which small quantities of the fiber have been produced. According to W. J. O'Brien, vice-president of Glidden Co., soy bean fiber is moth resistant and has good insulating properties.

Use of Fiberglas for producing decorative effects was discussed by Arthur B. Dick, president, Louisville Textiles, Inc. at a recent meeting of the Textile Square Club. At another recent meeting Herbert S. Morrow, of Calco Chemical Co., led a discussion on textile colors.

Nylon mono-filament yarn is now being used for surgical sutures in several hospitals in this country.

Staple fiber producers of Great Britain, Germany, Italy and Belgium have gotten together to set up an international agreement to insure orderly development of the world market. Dr. Werner Winkel of Germany has been named chairman.

Japan has voluntarily undertaken to allot to Australia two-thirds of the total wool imports from foreign countries.

Black has become one of the style leaders for early fall selling at retail in silk fabrics and silk ready-to-wear.

The International Silk Guild has purchased a 5-story building at 12 West 56th Street, New York, for the purpose of remodeling it and reopening it this fall as the "Silk House."

A fashion show demonstrating the various uses of Eastman acetate rayon is a new feature of the Tennessee Eastman Corp.'s exhibit in the Eastman Kodak Building at the New York World's Fair.

Nylon-reinforced toes are offered in women's hosiery by Spiegel, Inc., Chicago, in its fall catalog at $1.19 a pair. "Sheer as silk and wears five times longer," says the catalog.

Our front cover this month shows a flock of sheep in Montana with the Rocky Mountains in background. Photograph was taken by H. Armstrong Roberts, Philadelphia, and appeared in a brochure issued by James Lees & Sons Co. of Bridgeport, Pa.

NEWS ABOUT MEN

Captain Ellison A. Smyth, dean of the southern textile industry and now in his 92nd year, who has served as president of the Balfour (N. C.) Mills for many years, has resigned. He is succeeded by his grandson, **Ellison A. Smyth, 3rd.**

Roland E. Derby, chief chemist for M. T. Stevens & Sons Co., North Andover, Mass., has been appointed a trustee of Lowell (Mass.) Textile Institute by Governor Saltonstall. Four additional new trustees include: **Stephen Gleason,** of Walter L. Parker Bobbin & Spool Co.; **Ulysses Lucien,** of Pacific Mills; **Richard E. Chadwick,** of New England Telephone & Telegraph Co.; **Harold B. Farnsworth,** of Winchester, associated with a number of textile enterprises.

Forrest S. Dayton has resigned as executive vice-president and secretary of the Silk & Rayon Credit Association, New York, to become credit manager of Gunze Silk Corp., New York.

E. O. Steinbach, vice-president and general manager of Florence Mills, Forest City, N. C., has been named a member of the advisory committee of the North Carolina Industrial Safety Conference.

J. C. Dobson, owner and operator of the Dobson Hosiery Mills, Pulaski, Va., has been elected a director-at-large of Southwestern Virginia, Inc., succeeding the late Col. K. E. Harman, of Bluefield, Va.

D. D. Carroll has become treasurer of Marlboro Cotton Mills, McColl, S. C., succeeding **D. L. McColl,** resigned.

Edward J. Abbott, Wilton (N. H.) mill owner, and Mrs. Abbott were given a surprise reception at the Town Hall, preceded by a serenade at their home recently by the employees of Mr. Abbott's three mills, the Abbott Machine shop and the Abbott Worsted Mill of Wilton and the Hillsboro Mills of Pine Valley.

Lincoln Baylies, former assistant treasurer of the Naumkeag Steam Cotton Co., Salem, Mass., has joined the New England Power Service Co., Boston, as a rate engineer.

Anthony J. Pischel has become treasurer of Mayfair Cotton Mills, Arcadia, S. C.

P. J. Albright has become treasurer of Summit (Miss.) Textile Co.

Frank Bradley of Taylor, Clapp & Beall, New York, recently celebrated the 57th anniversary of his entry into the market, all of which time spent with the one selling house. Mr. Bradley joined Lawrence Taylor & Co. in 1882 as office boy. The firm name went through a number of changes, taking its present style in 1917.

James T. Hunter, of James T. Hunter Machine Co., North Adams, Mass., tied with Richard Chapmon of Greenwich, Conn. in the silver anniversary golf tournament, commemorating Frances Ouimet's winning of the amateur golf championship in 1914 on the Ekwanok course at Manchester, Vt. on July 1.

C. E. Blackler has been elected vice-president in charge of sales of the Springdale Finishing Co., Canton, Mass. For the last year and one-half he has been New York representative of this firm.

William E. McLeod is in charge of sales at the new direct selling offices opened in New York by Eagle & Phenix Mills and Bradley Mfg. Co., of Columbus, Ga. **Thomas V. Mackey** will have charge of all office matters. **P. W. Scott** will continue to supervise the sale of yarn.

R. F. Carraway has been named secretary of the Burlap & Jute Association, New York. **William G. Dwyer** is president.

W. S. Coulter, secretary and a director of Burlington Mills Corp., Greensboro, N. C., who has been acting-treasurer since the resignation of Edward F. Addiss, has been elected treasurer.

William A. McCleary, of White, Lamb, Finlay, Inc., New York, is retiring after nearly 52 years of service in the textile trade.

CRAMER SUCCEEDS CRAMER

The name of Cramer has long been an honored and famous one in the cotton textile industry. With the recent changes made in the personnel of Cramerton (N. C.) Mills, the name again makes news.

Stuart W. Cramer, Sr., one of the outstanding textile men of this country, has resigned as president of Cramerton Mills, Inc., in favor of his son, Stuart W. Cramer, Jr., who has already made a place for himself in textile leadership. Mr. Cramer, Sr. will hold the office of chairman of the board.

From as far back as 1893 Stuart Cramer has been a factor in the cotton textile industry. In his career as a textile engineer he designed more than 150 cotton mills in the South, and for all these he furnished machinery and equipment. He devised the four-frame spinning drive for transmission of electric power in cotton mills, and invented the Cramer humidification system. In 1913-14 he was president of the American Cotton Manufacturers Association. He has served as first vice-president of the Cotton-Textile Institute; as a member of the National Council of American Cotton Manufacturers; and is still serving as treasurer of the Textile Foundation.

Stuart W. Cramer, Jr.

Major Cramer, as Mr. Cramer, Jr., is known, is an alumnus of University of North Carolina, United States Military Academy, and the Philadelphia Textile School, and was in active army service for several years. For many years he has been associated with the Cramerton Mills, Inc., as treasurer and as vice-president. In 1925 he represented the American Cotton Manufacturers Association on an inspection tour of French textile industries, and later served as a member of the association's committee on standardization of dyestuffs and textile waste.

Sidney D. Blue will act in a selling, merchandising and styling capacity in connection with the sales office which is to be opened by Cherokee Spinning Co., Knoxville, Tenn., in New York next month. Mr. Blue takes up this work after ten years with Cluett, Peabody & Co.

Joe Pittman is now in charge of sales of Bibb Mfg. Co., Macon, Ga., in the Georgia, Florida and part of Tennessee territory.

Ruel E. Heywood, superintendent of Elm Mills for four years, has been appointed general manager of Tilton (N. H.) Worsted Mills, Inc., formerly Canterbury Mills, succeeding **George T. Lincoln.**

Albert E. Slater has been promoted from foreman dyer at California Hand Prints, Inc., Hermosa Beach, Calif., to superintendent of bleaching, dyeing and finishing.

M. B. Wallace, Jr., has become assistant manager of Nebel Knitting Co., Charlotte, N. C.

Fred W. Steele, general manager of Pierce Bros, Ltd., New Bedford, Mass., has been appointed by Governor Saltonstall on the advisory council of the Unemployment Compensation Division to represent employers. He succeeds **Willard Ormsbee** of Taunton, Mass., resigned.

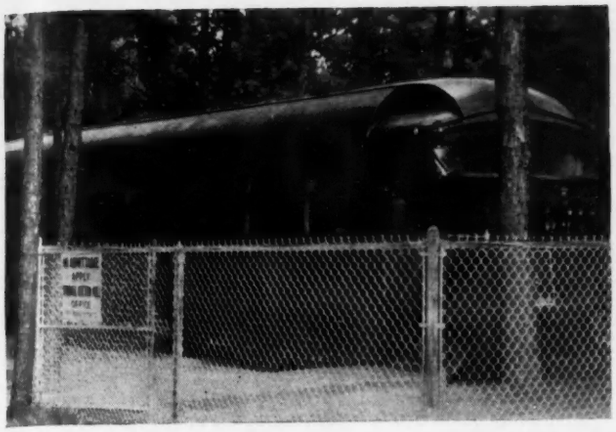
G. D. Maynor has been re-elected president of the Four Square Club, an independent organization of the employes of the Gaffney (S. C.) Mfg. Co.

Chester F. Woods, for the last 29 years associated with Cotton Threads, Ltd., has been named general sales manager of the firm with head office in Montreal, Que.

J. M. Gregg, who recently resigned as southern representative of the U. S. Bobbin & Shuttle Co., has accepted a position with Lancaster (S. C.) plant of Springs Cotton Mills. Mr. Gregg was formerly secretary of Southern Textile Association.

Thomas O'Keefe, head of the selling office of Berkshire Knitting Mills, New York, is chairman for the third annual golf tournament of New York Hosiery Men and their guests to be held at North Hills Golf Club, Douglaston, L. I. on Aug. 29.

Royal C. Murray, with Montgomery Ward & Co. since 1927, is associated with Iselin-Jeffer-



Capt. Elliott Springs, president of the Springs Cotton Mills, with plants at Chester, S. C., Fort Mill, S. C., Lancaster, S. C., and Kershaw, S. C., has moved his private office into a commodious private car, which has been shunted on to a siding in a pine tree grove close to one of his Fort Mill plants. Capt. Springs is also president of the Lancaster & Chester Railway and the car will always be ready to take him by rail wherever he desires to go. He stated that he was crowded out of his regular office by the expansion of his social security staff.

son Co., New York, as head of the bedspread department.

Otto Kraker has succeeded **Emanuel J. Weil,** resigned, as sales manager for Van Raalte Co., New York.

John Archer, general superintendent of Wayne Knitting Mills, Fort Wayne, Ind., since 1933, has resigned to become general superintendent of the Canadian Silk Products, Ltd., Sherbrooke, Quebec.

Dr. Ernest B. Benger, general assistant chemical director of E. I. du Pont de Nemours & Co. has been appointed assistant manager of the Rayon Department's Technical Division, which has been reorganized to include the technical work of the Nylon Division. **Maurice du Pont Lee** will continue as manager of the Rayon Department's Technical Division with headquarters at Wilmington. Dr. Benger is succeeded by **Dr. Cole Coolidge.**

Kenneth V. Chace of New Bedford, Mass. has joined the staff of the American Viscose Corp. at Lewiston, Pa.

I. B. Rosenfeld, has been elected president of the newly established converting firm, Brooksheer Textile Corp., New York. **Harry Bloom** is treasurer and **Harry Bases** is secretary, converter and stylist.

W. B. Williams, formerly superintendent of Anderson (S. C.) plant of Gossett Mills, has become assistant professor of weaving and designing at the Clemson College Textile School.

Robert B. Davis has been appointed general manager of Raybestos Division of Raybestos-Manhattan, at Stratford, Conn.

F. L. Asbury, Jr., has become general superintendent of Eagle & Phenix Mills, Columbus, Ga. **T. L. Culpepper, Jr.,** is now superintendent of manufacturing for the same mills.

Mrs. Alice Hoyos has joined J. M. Mathes, Inc., and will handle fashion publicity on Crown-Tested rayon fabrics for the American Viscose Corp.

Edward Luckraft, New Bedford, Mass., has been appointed assistant designer on the staff of Scheuer & Co., New York.

Miss Annette June Horvitz, New Bedford, Mass., the only girl graduate in the 1939 class of New Bedford Textile School, has been appointed stylist and designer for **Henry P. Koch,** who maintains a textile studio at 171 Madison Avenue, New York.

Robert W. Wersba for 20 years with Julius Kayser & Co. has succeeded **C. H. Barnes** as that firm's Pacific Coast manager.

M. G. Van Arsdale has been appointed vice-president and sales manager of the Artcraft Silk Hosiery Mills, New York, succeeding **Ralph J. Schwarz,** recently resigned.

Lewis M. Carpenter has been appointed mill technician of the fine and fancy goods department of Southeastern Cottons, Inc., New York.

D. William Armanda has joined the staff of F. Ducharme Silk Co., New York.

Floyd Y. Keeler, who recently retired as president of the Commodity Exchange, Inc., was tendered a dinner following the first annual golf outing of the members of that Exchange on

CLINTON

STARCHES

FOR ALL
TEXTILE PURPOSES

QUALITY
AND
SERVICE

CLINTON
COMPANY

CLINTON — — IOWA

A Speedy, Economical Surface-Active Agent!

. . . . . and here's what it will do *for you!* As a wetting-out agent it will act faster and more satisfactorily than any other product of its type. It will save you time . . . . cost you less. Surfax W.O. can be used successfully on all fibers. Test it by Draves Method or in production, and you will find these claims more than true.

In sanforizing, Surfax W.O. is unequalled in wetting-back ability, and will withstand high temperatures . . . Claimed by many as the fastest and most suitable product on the market today. And as a softener, besides softening, it will give your cloth exceptionally high absorbency. It never turns rancid in storage.

Write for trial quantity for test.

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THIRD & SOMERSET STS., PHILADELPHIA, PA.

Southern Division Office and Warehouse
1301-05 W. Morehead St., Charlotte, N. C.

NEWS ABOUT MEN

July 14 at the Fairview Country Club, Elmsford, N. Y.

James Arthur Hayes, manager of the Marcus Hook, Pa. plant of American Viscose Corp., and associated with that company for 18 years retired on July 15. He joined the company under Dr. C. A. Ernst in 1921.

Vincent H. Cocheran is now representing the selling organization of Neisler Mills Co., in the southern territory from Virginia to Texas.

Thomas Roy has become superintendent of Brooks Bros., Greenville, S. C. He succeeds **Walter W. Brooks.**

G. W. Johnson is now superintendent of Bradford Mills, Prattville, Ala., succeeding **A. L. Larkin.**

R. A. McMillan has become superintendent of Talladega (Ala.) Cotton Factory.

J. H. Warlick, formerly assistant superintendent of Falls Mfg. Co., and Double Shoals Cotton Mills, Granite Falls, N. C., has been promoted to superintendent.

J. D. Cassada has resigned as assistant to the manager of No. 2 mill of Roanoke Mills Co., Roanoke Rapids, N. C.

R. A. McCraney has assumed his new duties as superintendent of spinning at No. 4 mill of Chadwick-Hoskins Co., Charlotte, N. C., succeeding **J. F. Wright,** resigned.

C. C. Fisher, Lowell, N. C. is now superintendent of National Weaving Co. there.

T. P. Taylor, formerly superintendent of Adrian and Madora units, American Yarn & Processing Co., Mt. Holly, is now with Algodon Mfg. Co., Bessemer City, N. C. He is succeeded at American Yarn & Processing Co. by **W. H. Bushee** who is general manager of the company's five divisions as previously reported.

J. J. Norton has become superintendent of Goodyear Clearwater Mills, No. 1, Cedartown, Ga. He succeeds **R. H. Stewart.**

Frank Crossley has become assistant superintendent of Kendall Mills, New Bedford, Mass. He came from New Bedford five years ago and has been an overseer at Farr Alpaca Co. cotton mill, Holyoke, Mass.

Clifford L. Cann, superintendent of the branch of Cosmos Imperial Mills, Ltd., at Yarmouth, N. S., since 1919, has retired. **W. H. Brown,** assistant superintendent of the Hamilton, Ont., branch of Cosmos Imperial Mills Ltd., for many years, has been named as successor to Mr. Cann.

J. W. Quinn has resigned as general superintendent of the American Yarn & Processing Co., Mt. Holly, N. C.

C. L. Miler, recently resigned from Bradley Knitting Co., Delavan, Wis., where he was in charge of warehousing and transportation, has been named to the State Industrial Commission by Gov. Julius P. Heil for a six-year term.

John Cumnock has resigned as superintendent of the Cornelius (N. C.) Cotton Mills, and has accepted a similar position with the Graniteville Mfg. Co., Warrenville, S. C.

William Gordon Ogden, New Bedford, Mass., has been appointed assistant technician in the rayon department of Pacific Mills, Lawrence, Mass. He was the winner of the NACM medal, class of 1939, at New Bedford Textile School.

G. W. Rankin has accepted the position of superintendent of Richmond Hosiery Mill, Rossville, Ga.

C. E. Gore has resigned as superintendent of Fickett Cotton Mills, Whitehall, Ga., and has been succeeded by **A. L. Howland.**

Clifford P. Flanagan, New Bedford, Mass., has been appointed as a research chemist and technician at the Virginia Maid Hosiery Mills, Pulaski, Va.

A. J. McMinn, formerly with Victor-Monaghan Co., Greenville, S. C., has become superintendent of Toxaway plant of Gossett Mills, Anderson, S. C.

J. M. Bailey is now superintendent of Judson Mills, Greenville, S. C., having succeeded **E. M. Cushman.**

C. L. Duncan has been transferred from superintendent of Gossett Mills, Pendleton, S. C., to superintendent of Riverside plant of the same company at Anderson, S. C.

W. T. Morton has become superintendent of spinning, spooling and warping at Borden Mills, Inc., Kingsport, Tenn. He was formerly associated with Florence Mills, American Spinning Co. division, Greenville, S. C.

E. J. Boswell has become superintendent of Courtney Mfg. Co., Newry, S. C.

J. T. Bridges has become superintendent of Graniteville Mfg. Co., Vaucluse, S. C.

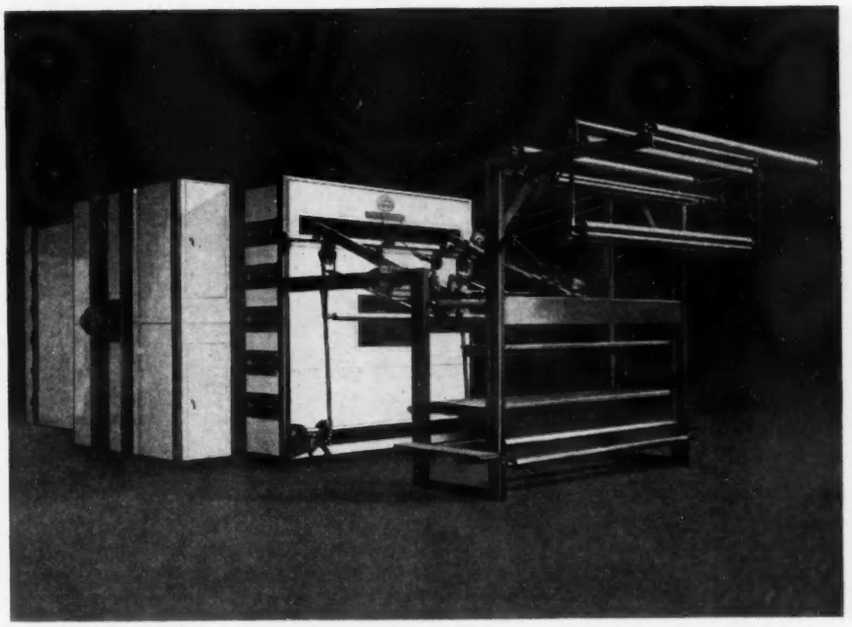
E. T. Pritchett is now superintendent of Juliette (Ga.) Milling Co., succeeding **Guy Fuller.**

G. L. McCartha is now superintendent of the glove plant of Trion (Ga.) Co. He succeeds **C. L. Dunn.**

B. B. Howard has been ap-

The New Hunter Duplex Tenter

Dries 12-ounce woolens at 40 yards per minute



Hunter now offers a completely new and radically different Cloth Tenter embodying an entirely new conception of air drying cloth to width with improved handle at high productive capacities.

Developed in 1939, this new Duplex Tenter, in a series of recent installations, dries

a. 12-ounce flannels at 40 yards per minute in 15 linear feet* of floor space for the dryer housing alone.

b. 32-ounce overcoatings at 10 yards per minute in 15 linear feet* of floor space for the dryer housing alone.

c. 16-ounce heavily felted navies at 20 yards per minute in 15 linear feet* of floor space for the dryer housing alone.

d. 16-ounce all wool tweeds at 27 yards per minute in 15 linear feet* of floor space for the dryer housing alone.

e. 1¼ pound all cotton blankets at 15 yards per minute in 15 linear feet* of floor space for the dryer housing alone.

f. 14-ounce worsteds at 35 yards per minute in 30 linear feet* of floor space for the dryer housing alone.

* These dimensions do not include the folder and entering end of Dryer.

Drying times are reduced to 1.2 to 4 minutes, depending upon the weight of the fabric. Thus your cloth is exposed to heat and air treatment but a fraction of the time usually required, with the consequent gain in handle and quality.

This new all metal unit requires only one man's operation. It is equipped with every known device for automatic, scientific, continuous operation, such as automatic guides, patented selvedge opener, temperature and humidity controls, recording devices and counters, remote control, tachometer, etc.

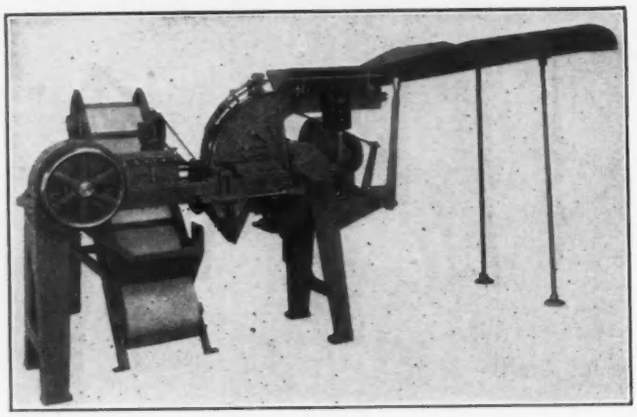
We cordially invite any interested mill man to mail the card enclosed with this issue of the Counselor. Its receipt by us will bring you by return mail, complete details of the new Hunter Duplex Tenter Dryer and the full story of its new method of air circulation, whereby air impinges on the cloth from both sides of the Dryer.

NOTE:—Hunter Tenter Dryers are also available as Straight-Away Frames, Vertical Pass Tenter Dryers, and Induced Draft Units.

JAMES HUNTER MACHINE COMPANY

NORTH ADAMS, MASSACHUSETTS **SINCE 1847**

Tremendous TRIFLES



It's the LITTLE *things that cut into your* PROFITS

Excessive waste or inefficiency is caught immediately, but it's easy to overlook the little things. Many mills have found this particularly true when they checked their bobbin cleaning departments. Obsolete equipment and cleaning methods harbor many small items of expense that are completely eliminated when the New Type K Quill Stripper is installed. It provides the most economical and efficient system ever devised for this purpose—cleans twice as many bobbins per operator as earlier machines, completely eliminates damage to bobbins and gives you direct control over filling waste.

★ ★ ★

Records on installations of the New TYPE K show they usually pay for themselves, in labor savings alone, in 1 year—always within 2 years. Write for full information.

THE NEW TYPE K BOBBIN STRIPPER

The **Terrell Machine Co., *Inc.***

Charlotte, N. C.

Luther Pilling, Danielson, Conn.—N. E. & Canada.
E. W. S. Jasper, Inc., Elizabeth, N. J.—Penn. & N. J.
Geo. Thomas & Co., Manchester, England.

NEWS ABOUT MEN

pointed superintendent of the woolen plant of Marshall Field & Co., Spray, N. C. He was promoted to this position.

Robt. L. Littlejohn has become superintendent of Spencer Mills, Rutherfordton, N. C. and Spindale, N. C.

G. A. Berkstresser is now assistant manager of No. 2 unit of Roanoke Mills Co., Roanoke Rapids, N. C.

J. M. Jordan has resigned as superintendent of Talladega (Ala.) Factory.

Jesse Scheider has become superintendent of Albemarle Weaving Co., Charlottesville, Va.

D. R. Neely is now superintendent of Boaz (Ala.) Mills, succeeding **J. L. King.**

W. H. Young has become superintendent of Gossett Mills, Pendleton, S. C., succeeding **C. L. Duncan.**

R. L. Bowles is now superintendent of Avondale Mills, Stephenson, Ala., plant, succeeding **G. A. Johnson.**

W. D. Stainton has entered upon his new duties as superintendent of Alabama Mills, Wetumpka, Ala., succeeding **T. J. Oliver.**

C. D. Kent has become superintendent of Aponaug Mfg. Co., Winona, Miss., succeeding **F. B. McDonald.**

W. F. Kraemer is now superintendent of Pendleton Mfg. Co., LaFrance, S. C., having succeeded **Joseph P. Erkes.**

Lee McLemore, superintendent of Riverside plant of Gossett Mills, Anderson, S. C., has resigned.

W. M. Carlisle has been promoted to overseer of carding and spinning at Riverside plant of Gossett Mills, Anderson, S. C.

J. L. Beard, formerly of Riverside & Dan River Mills, Riverside Division. Danville, Va., has become overseer of weaving at the Gayle unit of Springs Cotton Mills, Chester, S. C.

T. H. Whitesides has become overseer of spinning at the Woodlawn Mills, Mt. Holly, N. C., a plant of the American Yarn & Processing Co.

Arthur Phillips has been appointed assistant to the overseer of the weaving department of Ladlassie plant of Gossett Mills, Anderson, S. C.

A. J. Wright of St. Pauls, N. C., has become overseer of spinning, spooling and twisting at Carolina Textile Corp., Hamer, S. C.

H. P. McElroy, formerly assistant superintendent of Tifton (Ga.) Cotton Mills, has become general overseer of carding at Bibb Mfg. Co., Columbus, Ga.

J. Z. Lancaster, overseer of carding at Pacolet (S. C.) Mfg. Co., has been promoted to assistant superintendent of plants Nos. 3 and 5.

J. S. Edmunds has become overseer of weaving at the Ladlassie plant of Gossett Mills, Anderson, S. C.

George Varnadore has become section man in the spinning room of Gayle plant of Springs Cotton Mills, Chester, S. C.

J. A. Anderson has been promoted to night overseer of spinning at Toxaway unit of Gossett Mills, Anderson, S. C., from second hand.

R. J. Adams has been appointed assistant superintendent and overseer of spinning at Riverside Mill, Anderson, S. C., a unit of Gossett Mills.

M. D. Nichols of Greenville, S. C., has become overseer of weaving at Toxaway Mill of Gossett Mills, Anderson, S. C.

Obituary

Edwin Raymond Lucas, 74, for many years vice-president of the former Baldwin unit of the Aragon Baldwin Cotton Mills, Chester, S. C. and more recently associated with the Neely Cotton Mills, York, S. C., died at York, July 22.

Richard F. Wissner, 45, member of the board of directors and factory superintendent of Jantzen Knitting Mills, Portland, Oregon, died July 19. He joined Jantzen in 1915.

James Roberts, 81, a retired carpet yarn manufacturer of Philadelphia, died July 20.

Raymond Thorp, who retired a year ago after an association of 39 years with Read & Lovatt Co., Weatherly and Palmerton, Pa., and at one time vice-president and general manager, died at Palmerton, Pa. July 18.

Frank L. Carpenter, 71, formerly treasurer of Davis Mills, Fall River, Mass., died July 11. Mr. Carpenter was a trustee of Bradford Durfee Textile School, a former secretary of the Fall River Cotton Manufacturers Association, a director of the B. M. C. Durfee Trust Co., and an officer of the Union Savings Bank.

Frank H. Watson, inventor of the centrifugal cotton gin described in the January, 1938, issue of TEXTILE WORLD, died at his home in Jonesboro, Ark., July 26, at the age of 62.

William Maxwell, 76, prominent textile executive in Rockville, Conn., died July 27. For many years he served as president and director of Hockanum Co., treasurer of Hockanum Mills Co. and American Mill Co. and Minterburn Co., retiring in 1934.

Sol N. Cone, 71, member of a famous cotton-textile family, died July 9. He leaves four brothers, including Bernard M. Cone, chairman of the board of Proximity Mfg. Co. and Julius W. Cone, president of Cone Export & Commission Co.

Joe L. Hart, 72, founder of the Hart Cotton Machinery Co., died at his home in Chickasha, Okla.

William C. Zylstra, 52, for many years active in the textile industry, died suddenly in Taftville, Conn., where he was assistant superintendent of Ponemah Mills. He had been previously superintendent of Spencer Mills, Spindale, N. C., and general superintendent of Booth Mill, New Bedford, Mass.

Sir Charles B. Gordon, 71, president of Dominion Textile Co., Bank of Montreal and other important Canadian corporations, died suddenly in Montreal, July 30.

Thomas Le Clear, 63, chief analyst for the Cumberland (Md.) plant of Celanese Corp. of America, died July 24.

George E. Schultz, 67, head of the printing fabrics department of the Hampton Co., Northampton, Mass., from 1919 to a year ago, when he retired, died July 19 at a Northampton Hospital.

James A. Grourke, 51, former silk executive in New Bedford, Mass., died July 8. He was owner and president of Anthony Silk Mill until 1935, and was associated in the management of the Premier and Sullivan Silk Mill.

William A. Hewitt, 66, president of the Greensboro (N. C.) Supply Co. since its establishment in 1902, died at his home there July 16.

Charles N. Stoddard, 62, a director of the Berkshire Fine Spinning Associates, and former chairman of the board and president of the Greenfield Tap & Die Corp., died suddenly at Greenfield, Mass. on June 26.

Walter F. Connolly, 40, who recently resigned as assistant secretary of Textile Banking Co., New York, after an association of nearly 18 years, died late in June.

I. M. Pearlman, president of Pearl Silk Co. and of the Wyoming Weaving Co., Wyoming, Pa., died recently.

William A. Stafford, 58, president of Stafford & Co., carpet yarn manufacturers, Manayunk, Pa., died July 6.

Clarence H. Gray, of Interwoven Stocking Co., New York, died July 3.

Matthew R. Dickson, 83, vice-president of J. W. Valentine & Co., New York, died July 15.

John Z. O'Donnell, 58, assistant director of the trade analysis division of E. I. du Pont de Nemours & Co., died at Wilmington, Del., July 5.

Frank W. Gurry, for several years superintendent of Aurora (Ill.) Cotton Mills, died in that city July 10.

Herbert Smith, 69, at one time superintendent of the Whitman Mills, New Bedford, Mass., and of Davol Mills, Fall River, Mass., died in Santa Fe, New Mexico, recently.

Howard H. Borkey, 43, associated with Auburn (N. Y.) Knitting Mills, died recently.

Robert W. Hume, 51, for 16 years an instructor in the textile department at the Massachusetts Reformatory in West Concord, died recently.

Harry L. Perchard, 69, senior sales executive of the Print Department, Dominion Cotton Mills, Montreal, Que., died recently.

Morton F. Judd, 55, general manager of Raybestos Division of Raybestos-Manhattan, Inc., Stratford, Conn., died recently.

Floyd C. Achenbach, 49, vice-president and general manager of Monroe Silk Mills Stroudsburg, Pa. died recently in Port Jervis, N. Y.

John Ratchford Hart, 66, director and officer of a number of New England textile corporations operating in the two Carolinas, died at his home in York, S. C., recently.

J. M. Miller, 74, a leader in the organization of the first cotton mill at Stony Point, N. C., died recently.

Dennison Walker, 95, oldest resident of Ware, Mass., died July 5 following a brief illness. Mr. Walker was formerly prominent in the textile industry and owned mills in Maine, Rhode Island and Connecticut. He retired 20 years ago.

Harold E. Whitney, clerk of the Fort Dummer Mills branch of the Berkshire Fine Spinning Associates and director of several electric power companies, died at his home in Brattleboro, Vt., recently.

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☐ Aviation Engineering
☐ Boilermaking
☐ Bridge Engineering
☐ Building Estimating
☐ Chemistry
☐ Civil Engineering
☐ Coal Mining
☐ Contracting and Building
☐ Cotton Manufacturing
☐ Diesel Engineering
☐ Electrical Engineering
☐ Electric Lighting
☐ Fire Bosses
☐ Foremanship
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☐ Heat Treatment of Metals
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☐ House Planning
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☐ Mechanical Drafting
☐ Mechanical Eng'ring
☐ Patternmaking
☐ Plumbing
☐ Public Works Eng'ring
☐ Radio ☐ Refrigeration
☐ Sanitary Engineering
☐ Sheet Metal Work
☐ Steam Elec. Eng'ring
☐ Steam Engineering
☐ Steam Fitting
☐ Structural Drafting
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☐ Surveying & Mapping
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☐ Telephone Work
☐ Toolmaking
☐ Ventilation
☐ Welding, Electric and Gas
☐ Woolen Manufacturing

BUSINESS SUBJECTS

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☐ Advertising
☐ Bookkeeping
☐ Business Correspondence
☐ Business Management
☐ Civil Service
☐ College Preparatory
☐ Cost Accounting
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TEXTILE MILL NEWS

Cotton Mill News

Cherry Cotton Mill, Florence, Ala., was purchased July 12 by RFC and the First National Bank of Florence for $100,000, at a foreclosure sale.

J. C. Sanders Cotton Mill Co., Inc., will be the new name of the old Aponaug Mfg. Co., Mobile, Ala., recently purchased by Sanders. The mill is now on a two-shift basis.

Girard Mill, unit of Eagle & Phenix Co., located at Phenix City, Ala., has been sold to Roy E. Martin and sons, Ed Martin and Roy Martin, Jr., along with 90 dwellings and all other property in Phenix City.

Ponemah Mills, Taftville, Conn., has appointed McCampbell & Co., New York, direct selling agent for its products.

Athens (Ga.) **Mfg. Co.,** tire fabrics, specialty yarns, and sheetings, is constructing a 100x500 ft. addition at cost of over $100,000.

Gainesville (Ga.) **Cotton Mills** have sold about 100 of the dwellings in the mill village to operatives. Prices range from $1,200 to $1,500.

Pacolet Mfg. Co., New Holland, Ga., has awarded general contract to Daniel Construction Co., Anderson, S. C., for one-story addition, 75x100 ft., to be equipped as a Sanforizing unit.

Tallapoosa (Ga.) **Mills** have discontinued operations and it is announced that the plant will be closed permanently.

Martha Mills, Thomaston, Ga., have plans under way for a one-story addition, for warehouse. Robert & Co., Atlanta, Ga., are architects and engineers. Cost reported about $40,000.

Potomac Textile Corp., Frederick, Md., recently organized, plans operation of a cotton mill. Company is headed by Amos A. Holter and St. Clair Barnes.

Crescent Mfg. Corp. has purchased the equipment of Barnard Mfg. Co., Fall River, Mass., from Reconstruction Finance Corp., and will dispose of it. The equipment comprises 1,516 looms, 120 cards and 58,000 spindles.

Parkdale Mills, Gastonia, N. C., have work under way on one-story addition, totaling 12,500 sq. ft. floor space, for expansion in finishing division, with portion reserved for warehouse. Cost estimated $30,000.

Ada McLean Mills, Lumberton, N. C.—Equipment of this mill, idle for some time, has been bought by C. L. Upchurch & Sons, Athens, Ga.

Columbia Mfg. Co., Ramseur, N. C., is embarking upon a complete modernization program.

Randolph Mills, Inc., Franklinville, N. C., is constructing an addition to its dyeing department.

St. Pauls (N. C.) **Cotton Mill**—At recent public sale in receivership, property was bid in at $90,000 on joint offer of trustees of Robeson County, Town of St. Pauls and bondholders of company. The sale is subject to confirmation by the District Court.

Spencer Mills, Inc., with mills at Spindale and Rutherfordton, N. C., filed plans for reorganization under the Chandler Act with Federal Judge Webb of the Federal Court (Asheville, N. C.). The plan would place A. G. Heinsohn, of Cherokee Spinning Co., in charge.

B. F. Goodrich Co., Akron, Ohio, has awarded general contract to Batson-Cook Co., West Point, Ga., for new branch mill at Clarksville, Tenn., where large tract of land has been acquired. Main unit will be one-story, 200x800 ft., with adjoining structure.

St. Louis Towel Co., a co-operative company organized by textile operatives out of work, has started up in portion of the former Henry Holmes Sons carpet plant on Trenton Ave. at William St., Philadelphia.

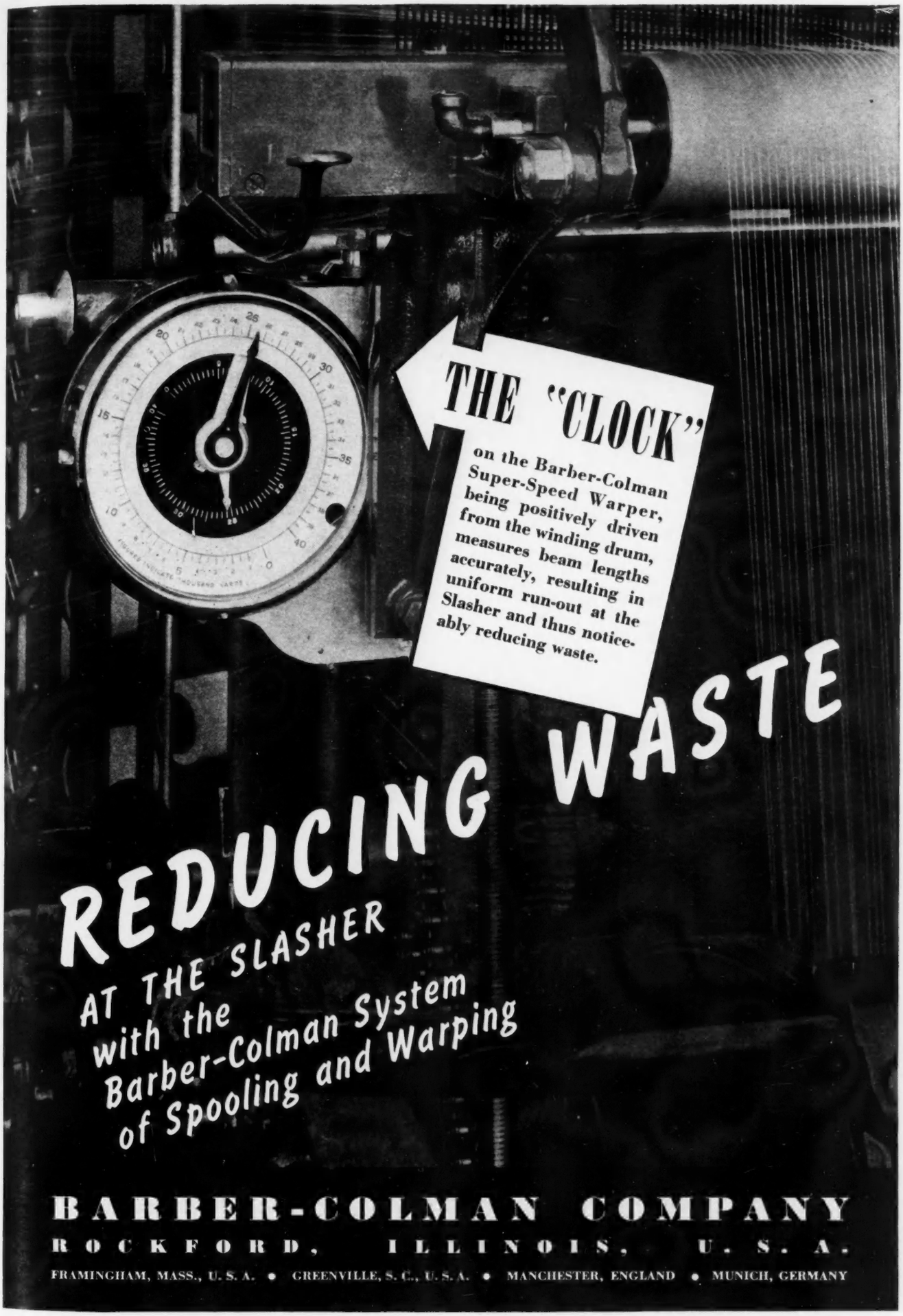
Appleton Co., Anderson, S. C., has an extensive modernization program under way. Two hundred new looms have already been installed. The program calls for 1,700 Model X looms, and represents a total cost of $1,000,000. It will cover five years, it is understood.

Gossett Mills, Anderson, S. C., have installed a Johnson slasher in their Ladlassie plant.

Glencoe Cotton Mill, Columbia, S. C., has been ordered resold by Circuit Judge Bellinger, who held that a bid of $26,350 received at auction July 3, was inadequate. The resale will be held in September.

Springs Cotton Mills, Fort Mill, S. C., is remodeling all of its older houses. Recently 100 new homes, with garden property and garages, were built for operatives.

Victor-Monaghan Co., Victor and Greer units, Greer, S. C., have revamped the humidifying system, and have installed new long-draft spinning, changed the card room equipment from three-process roving to two-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on the Barber-Colman Super-Speed Warper, being positively driven from the winding drum, measures beam lengths accurately, resulting in uniform run-out at the Slasher and thus noticeably reducing waste.
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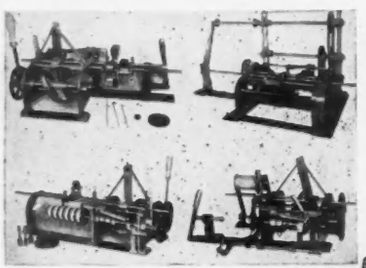

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SINGLE END
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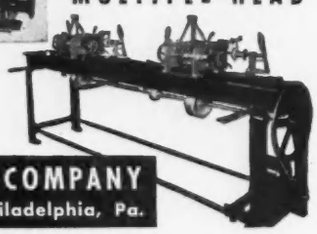

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process long-draft, and changed the 7½ in. warp bobbins to 8½ in. Company has also installed a new water supply and sewage disposal system in its village.

Excelsior Mills, Union, S. C., closed for the last three months, has reopened and is running on full time.

Dominion Textile Co., Ltd., Montreal, Que., has begun erection of addition to mill on Lacroix St., for which general contract was let to J. W. Rose, Ltd., Montreal. It will be used for warehouse. Cost close to $175,000. The company has installed at its Montgomery, Que., plant eight one-process picking units designed by the company's engineering staff. The company has ordered 14 Crompton & Knowles blanket looms, 85 in. wide, for the same plant. In the Mt. Royal branch, 150 Draper Model X looms have been installed and 10 additional looms in its Sherbrooke mill.

Wool Mill News

American Woolen Co., Norwich, Conn., will award contract for a new boiler plant on Shipping St. Plans call for a 45x50 ft. brick and concrete structure.

Park Mill, Webster, Me., has been sold to five townsmen at a reported price of $23,000. This woolen mill, idle since October, was sold at auction June 2 to Jack Weinstein of Cherry Valley, Mass., on the agreement he should operate it. When Weinstein decided not to do so, a second sale was held.

Hayward - Schuster interests have placed orders with Johnson & Bassett, Inc., machinery builders, Worcester, Mass., which will give their mills a total of nearly 9,000 Giant Package mule spindles. These mules will be placed in the Hayward Woolen Co. and Schuster Woolen Co., East Douglas, Mass., and in Millbury (Mass.) Woolen Co.

Farr Alpaca Co., Holyoke, Mass., on July 21 rejected the offer of Consolidated Products Co. of $600,000 for the plant which would have involved operation of the cotton mill and finishing plant. Company is liquidating to No. 1 plant under Geo. D. Flynn, Jr., and J. D. Flynn of Fall River.

Merrimack Woolen Mills, Lowell, Mass., has begun erection of a one-story addition for expansion of dyehouse.

Star Woolen Co., Cohoes, N. Y., plans to establish a plant in South Pittsburgh, Tenn., where it has bought the property of Aycock Hosiery Mills.

National Worsted Mills, Inc., Jamestown, N. Y., awarded general contract to Warren Construction Co., that city, for construction of a 1-story addition and other improvements to its plant in Falconer, N. Y.

S. Stroock & Co., Newburg, N. Y., reports net loss for first six months of 1939 of $16,264 against net loss of $47,871 for similar period of 1938.

Apex Plush Mills have been set up at 1806 East Venango St., Philadelphia, to manufacture mohair and other plushes.

Collins & Aikman Corp., Philadelphia, Pa., has awarded general contract to George W. Kane, Durham, N. C., for two-story saw-tooth roof addition to branch mill at Roxboro, N. C. Cost reported over $50,000.

Colony-Sharp Carpet Co., Philadelphia, Pa., a cooperative company recently organized by weavers out of work who each subscribed $200, has started up the plant formerly owned by Henry Holmes Sons Co., operating 22 wilton and 11 tapestry looms. James Pollock is manager.

Joseph Benn Corp., Greystone, R. I., has concluded arrangements for purchase of entire properties of Holden-Leonard Co., Bennington, Vt., including real estate, mills and employes' houses, and proposes to operate as principal mill in the future. Operations are being discontinued at Greystone plant, which may be liquidated.

Lebanon Mill Co., Pawtucket, R. I.—Property of this company is being liquidated by James J. Corrigan, trustee in bankruptcy.

Carroll Worsted Mills, Providence, R. I., in liquidation, has paid its fifth and final dividend.

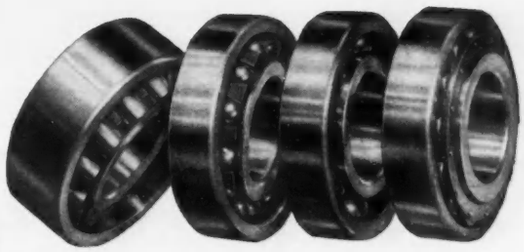
Tarkiln (R. I.) **Woolen Mills** will probably be sold by Joseph Schmetz, receiver, after stock in process is run out.

Rock River Woolen Mills, Janesville, Wis., have installed six new automatic looms.

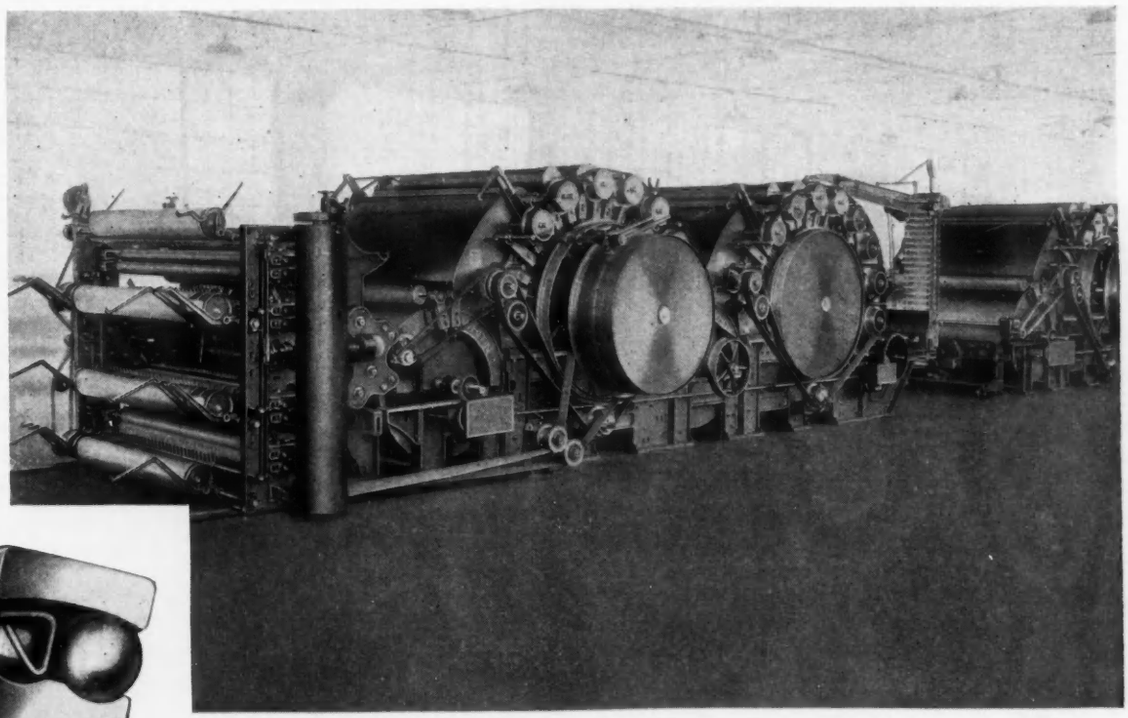
Rayon & Silk Mill News

New Process Rayon, Inc., at a meeting July 19, at Gloucester, N. J., ratified the change in company name to Imperial Rayon Corp. Paul Zens was re-elected president. It was announced production would probably be increased to 10,000 lb. daily. Martin P. Glynn, Jr., Philadelphia, is general sales manager and Bernhardt Bros., of Charlotte, N. C., is sales representative in the territory south of Virginia. Company reports net loss of $99,549 for 1938, compared with net loss of $7,539 for 1937.

Hartford Rayon Corp., Rocky Hill, Conn., has been granted a $400,000 RFC loan. Company plans to build at $125,000 power plant and a $50,000 recovery



WHITIN WOOLEN CARDS WITH SKF BALL BEARINGS MEAN STEPPED-UP PRODUCTION ALWAYS



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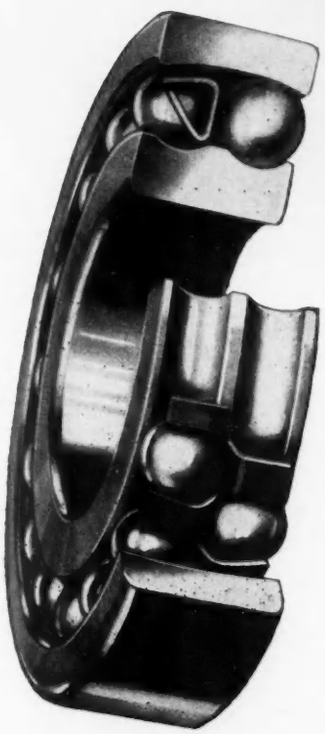

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● Freedom from bearing trouble more than justifies the selection of SKF Bearings for this Model "G" Woolen Card built by Whitin Machine Works. By always keeping main and fancy cylinders and the motor drive countershaft in proper alignment, SKF save lost time and lost dollars resulting from production delays.

With SKF Bearings, fire hazards, binding bearings and product spoilage due to lubricant leakage become evils of the past. Always these self-aligning, self-contained bearings insure cleanliness and full capacity under severe misalignment conditions.

The performance records established by SKF Bearings since 1907, when SKF pioneered the application of antifriction bearings to textile machinery, have led textile machinery manufacturers everywhere to use them as standard equipment. When you select SKF Bearings, therefore, you select the *original* textile ball bearings.

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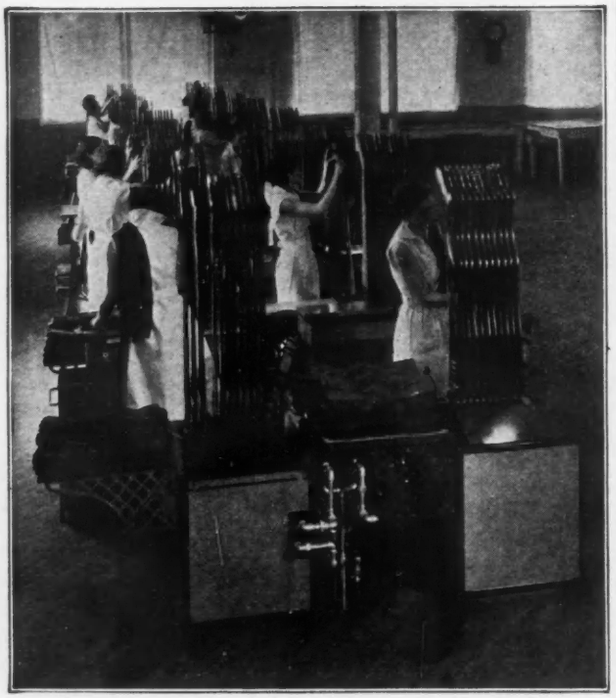
1000 DOZENS DAILY

HOSIERY FINISHING



A PRODUCTION in excess of 1,000 dozens full fashioned ladies' hosiery is being finished daily on the 13 PARAMOUNT DUAL HEAT MACHINES operated in this mill during one eight-hour shift—and the character and quality of the work is incomparable since the PATENTED DUAL HEAT principle of drying is positive protection against "baking" delicate silk fabrics. Not only does the PARAMOUNT DUAL HEAT MACHINE contribute outstanding features of production and quality, but it represents—

1. Less investment per dozen
2. A minimum of floor space occupancy
3. Less power and steam consumption per dozen
4. Ideal room and working conditions
5. Less maintenance
6. Ease and comfort to the operator
7. Simplicity and durability of construction

Any one feature alone, of the numerous advantages which the PARAMOUNT DUAL HEAT MACHINE offers, will justify a change to this superior method of hosiery finishing.

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PARAMOUNT TEXTILE MACHINERY CO.

538 South Wells Street Chicago, Illinois

plant; balance of loan to be added to working capital.

Ramsay Mills, Inc., New Bedford, Mass., have been chartered with capital of 5000 shares, to manufacture rayon satins, taffetas, etc., and will occupy the second floor of the local Nonquitt Mill No. 1, formerly used by the Edgar Weaving Co.

Meadox Weaving Co., West New York, N. J., has plans for new one-story mill, 75x150 ft., at Ridgefield, N. J., where site has been secured in the Ridgefield Industrial Terminal district.

North American Rayon Corp., New York, reports profits of $292,001 for second 12 weeks of 1939. For first 12 weeks net profit was $324,458.

Puritan Weaving Co., Fayetteville, N. C., has completed installation of $100,000 worth of new spinning machinery.

Mid-State Cloth Mills, Inc., Newton, N. C., have completed an addition which will double the size of plant.

Fleetwood (Pa.) **Textile Co.** will be sold at auction Aug. 12 as result of default on a $40,000 mortgage.

D. & G. Throwing Co., Watsontown, Pa., has closed its local mill permanently.

Leon-Ferenbach Silk Co., New York, N. Y., has approved plans for expansion in branch mill at Johnson City, Tenn., consisting of a one-story addition, about 3500 sq. ft. floor space, to increase capacity in spinning department, with installation of about 40 new machines.

Tennessee - Eastman Corp., Kingsport, Tenn., has additions now under way to production facilities which will permit increased output of the acetate staple, Teca.

Grottoes (Va.) **Silk Mills, Inc.,** have been bought by the American Cliffton Corp., New York, for $11,000. The mill was equipped with 72 looms.

Orange, Va.—John A. Balsam, care of Orange County Chamber of Commerce, has concluded arrangements for purchase of tract of about 27 acres on Spices' Mill Rd., near Orange, as site for new mill for velvet weaving and will organize a company. Initial unit will be one-story, 80x160 ft., scheduled to be completed in October.

South Hill (Va.) **Factory Corp.,** a rayon ribbon weaving plant, is now in operation with equipment valued at $150,000. Plant is owned by local interests, and is managed by Frank D. Herbsher. Forty looms have been installed.

Vancouver Rayon Silks, Ltd., Vancouver, B. C., recently organized, have taken over property in North Shore district, formerly used as lumber mill, and will begin work at once on new temporary plant. Cost estimated about $350,000, with equipment. Completion is scheduled in the fall. At a later date, it is proposed to build a larger mill on adjoining site. Frederick Dawson is president. Paul Zuest of Budapest is initiating the project.

Granby Elastic Web Ltd., Granby, Que., is increasing production by installation of new machinery for producing staple and new types of fabrics, including eight Raschel automatic knitting machines, 20 looms and two warpers.

Knitting Mill News

Erwin Mfg. Co., Huntsville, Ala., plans to resume operations, having been sold to T. G. Melson, trustee for the creditors, for $35,000.

Lamco Knitting Mills, 325 West Pico Blvd., Los Angeles, Calif., were sold recently by Lillian A. Combes to Sam Reich.

Real Silk Hosiery Mills, Dalton, Ga., is installing additional full-fashioned machines.

General Hosiery Co., Fort Wayne, Ind., has added four new, high-speed, long-section knitting machines.

Gotham Silk Hosiery Co., New York, reports net profit of $91,515 for first six months of 1939 compared with $8,278 for similar 1938 period.

Van Raalte Co., Inc., New York, N. Y., has awarded general contract to Gillmore-Carmichael-Olson Co., Cleveland, Ohio, for one and two-story mill at Blue Ridge, Ga. Cost estimated close to $200,000, with equipment.

Baker-Mebane Hosiery Mills, Burlington, N. C., will have their new addition, costing $150,000, completed by Sept. 1. About 60 new machines will be installed.

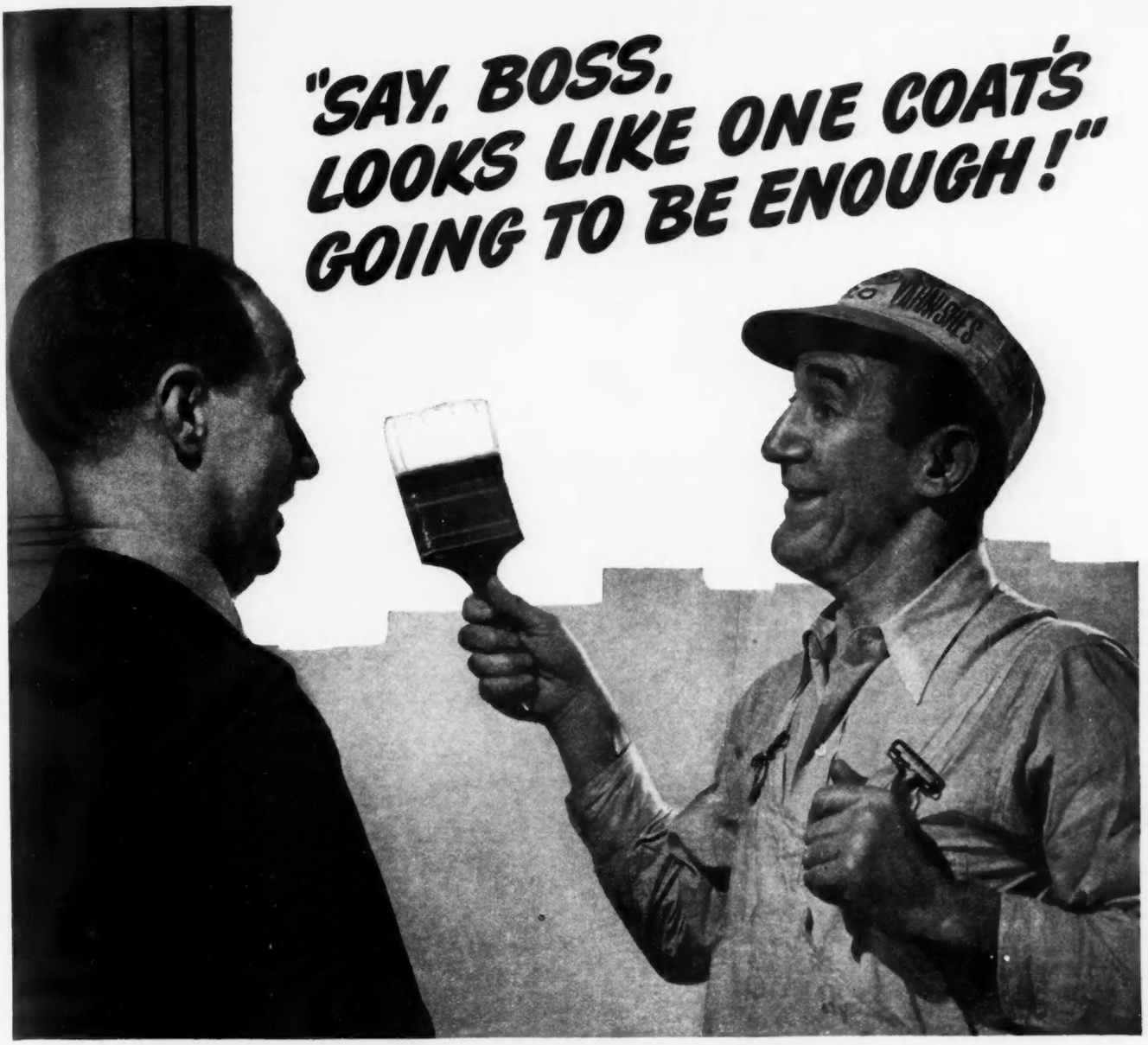
May Hosiery Mills, Burlington, N. C., completed their new testing laboratory addition.

McEwen Knitting Co., Burlington, N. C., has begun the construction of a two-story 50x100 ft. addition, costing $25,000.

G. & H. Hosiery Co., Inc., Hickory, N. C., has constructed a two-story addition to its plant.

Wadesboro (N. C.) Full-Fashioned Hosiery Mill began operations July 25. T. J. Wallner is president; C. L. Little, secretary-treasurer; J. B. Morris, operating manager.

Louis Lavitt Co., operated by Louis and Sam Lavitt, has purchased the Hollar Hosiery Mills bldg. at Highland and Fourth St., Hickory, N. C., and will take charge on Oct. 1.



NEW DULUX

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HIGH-HIDING MILL WHITE

ALREADY this sensational new Du Pont Mill White is getting a big hand from mill operators.

For even when present paint is in only reasonably good condition, DULUX High-Hiding Mill White gives excellent results with *only one coat!*

This new mill white has all the standout qualities of regular DULUX Mill White—whiter initial whiteness, superior whiteness retention, long run economy. It saves money on overhead because it needs fewer *re*-paintings.

And DULUX High-Hiding Mill White costs less to apply. Its tremendously stepped-up hiding power means only one coat is necessary. If present paint is in very poor shape, a priming coat may be necessary. Fewer coats call for fewer gallons of paint to buy. One coat takes less time to apply than two or three . . . your machinery is idle for a shorter time.

If you would like full information about this amazing new mill white, just write to E. I. du Pont de Nemours & Co., Inc., Finishes Division, Wilmington, Del.

DU PONT

E. I. DU PONT DE NEMOURS & CO., INC., FINISHES DIVISION, WILMINGTON, DELAWARE

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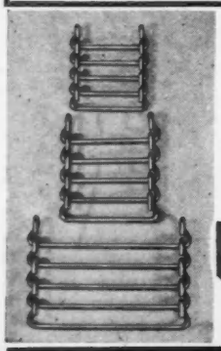

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Accurately made from high grade material—built to last and to hold its shape.

SINKER HEAD SLOT CUTTERS
The ideal tool for cleaning out slots in sinker and divider heads. Made in all gauges. Each one comes in a leather carrying case.

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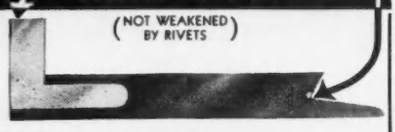

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Designers and Spinners of Novelty Yarns

Textile World's
Annual Rayon Yearbook Number
will be published
September, 1939

TEXTILE MILL NEWS

Shoaf-Sink Hosiery Mill, Lexington, N. C., has announced plans for expanding the finishing department. An addition is being built, 60x160 ft.

Liberty (N. C.) **Hosiery Mills** are constructing a finishing unit, scheduled to be completed Nov. 1. It will cost about $100,000.

Kale Knitting Mills, Inc., Mebane, N. C., lately organized with capital of $100,000, have work nearing completion on modernization of local one-story building, secured under lease.

Highspire (Pa.) **Knitting Co.** is closing its business and liquidating.

Kenneth Kemp started a new plant on July 17 at Jonestown, Pa., occupying the second floor of the P. O. S. of A. hall. The plant will manufacture sport jackets.

Meinig Hosiery Co., Reading, Pa.—Property of this company, including real estate, mill and machinery, has been sold at public auction to a number of purchasers for $91,264 and court has confirmed sale.

Wrightsville (Pa.) **Hosiery Mill, Inc.,** has been chartered to establish and operate a full-fashioned hosiery mill.

Kain-Murphey Corp., Chattanooga, Tenn., has been formed to operate a knitting mill. John G. Kain is president and William Murphey is vice-president.

Magnet Mills, Clinton, Tenn., is in process of replacing its full-fashioned machines with longer section, finer gage machines.

Charles H. Bacon Co., Loudon, Tenn., is now erecting a 100x296 ft. building, instead of a smaller building which original plans called for.

Danville (Va.) **Knitting Mills** have constructed a 63x100 ft. addition. This and other improvements total $24,000.

Galax (Va.) **Knitting Co.,** Galax, Va., has purchased 24 additional machines for half-hose, and is constructing an addition with 6,000 sq. ft. of floor space.

Grayson Full-Fashioned Hosiery Mills, Inc., Pulaski, Va., have been chartered with capital of $200,000. E. H. Wilkins of Greensboro, N. C., is president.

Virginia Maid Hosiery Mills, Pulaski, Va., have awarded general contract to Fiske-Carter Construction Co., Spartanburg, S. C., for one-story addition, for offices and other operating service, to cost about $25,000.

Wallner Silk Hosiery Mills, Pulaski, Va., let contract last month for construction of a second unit, a two-story addition giving 20,000 sq. ft. space. Twenty-six additional full-fashioned hosiery machines will be installed.

Midwest Sportswear Mfg. Co. has opened a plant at Baraboo, Wis., with W. J. Nesbit, formerly of Mt. Vernon, Ill., as general manager. Mrs. N. A. Bender, Chicago, is president.

C. J. Grenier & Co., Montreal, Que., is erecting a new plant at St. Johns, Que., for full-fashioned hosiery. Additional Wildman single unit machines will be installed. The company will also install dyeing and finishing equipment.

Processing Plant News

United States Finishing Co., Norwich, Conn., has approved immediate erection of one-story addition to local mill, 52x185 ft., for expansion in bleachery. Cost over $60,000, with equipment.

Normandy Print Works, Fall River, Mass., recently organized with capital of 100 shares, will operate a print and dye works in local Union Mill No. 3. Alfred S. Sherwin is president.

Bouchard & Charvet, Inc., Paterson, N. J., have taken over mill at 182 Sheridan St., formerly occupied by the Columbia Piece Dye Works, and are removing their two other local mills, at 44 Lewis St., and Mill B, Shady Ave., to new location.

De Gise Piece Dye Works, Inc., Paterson, N. J.—A voluntary petition in bankruptcy has been filed by this company.

Brewin Process Corp., Pleasantville, N. J., has been organized with capital of 1000 shares of stock, by Harry Brewin, associated with the Peerless Hosiery Dyeing Co., Inc., to operate a textile processing plant.

United Piece Dye Works, Lodi, N. J., reports net loss for year ended Dec. 31, 1938, of $719,052 against net loss of $813,625 for 1937.

William Wilhelm Co., Passaic, N. J.—Harry B. Haines has been appointed receiver for this company in bond of $50,000.

York Textile Print Corp., Brooklyn, N. Y., is a screen printing firm just established by Max Jacobs and Oscar Weiner of Astoria Textile Print Works.

Hartsville (S. C.) **Print & Dye Works** has filed plan of reorganization under 77B. Bondholders' action in opposition to reorganization was pending in U. S. Circuit Court of Appeals.

A Brust & Co., a new company with a capital of $55,000, will establish a dyeing and finishing plant in Montreal, Que., for the converting of silk hosiery. The officials of the company are refugees from Chemnitz, Germany.